

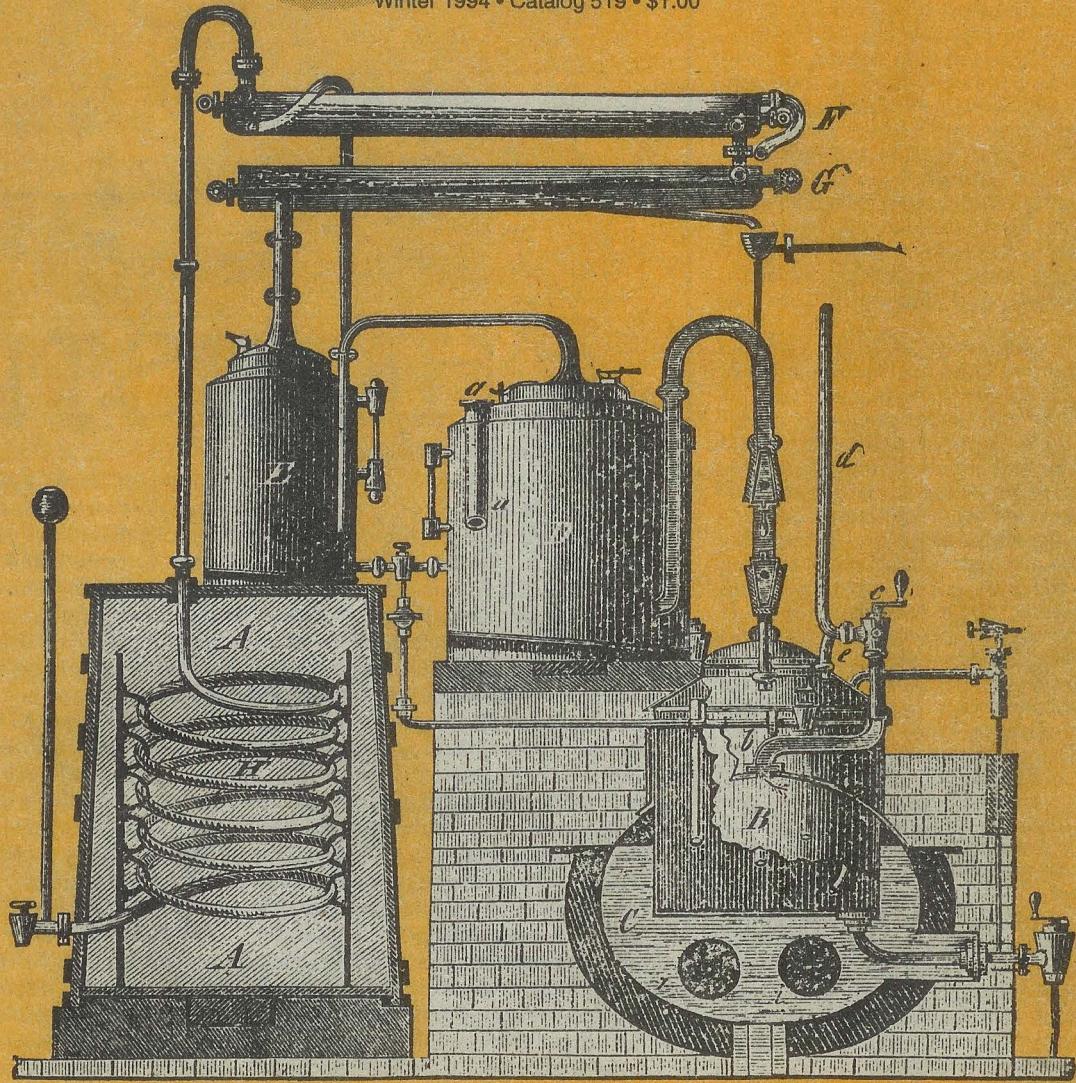
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- **Division II** — Crude materials and products of chemical industry — Carbonate of Potassa; Saltpeter, Nitrate of Potassa; Nitric acid; Technology of the Explosive Compounds — gunpowder, and the chemistry of fireworks or pyrotechny; Nitroglycerine; Gun-cotton; Common salt; Manufacture of Soda — native soda; Soda from plants or soda-ash; Soda Prepared by Chemical Processes; Preparation of Iodine and Bromine; Sulphur; Sulphurous and Hyposulphurous Acid; Manufacture of Sulphuric Acid; Sulphide of Carbon; Hydrochloric Acid and Glauber's Salt, or Sulphate of Soda; Bleaching Powder and hypochlorites; alkalimetry; Ammonia and ammoniacal salts; Soap making; Boric or boracic acid, and borax; Production of alum, sulphates of alumina, and aluminates; Ultramarine

- **Division III** — Technology of Glass, Ceramic Ware, Gypsum, Lime & Mortar Glass manufacture; Ceramic or earthenware manufacture including hard porcelain, tender porcelain, stoneware, Fayence ware, common pottery, brick and tile making; Lime and lime-burning; Mortar including common or air-setting mortar and hydraulic mortar; gypsum and its preparation

- **Division IV** — Vegetable Fibers and Their Technical Application — Hemp; Cotton; Paper making — hand paper, machine paper, pasteboard and other paper; Starch; Sugar manufacture; Cane Sugar; Beet-root; sugar; Grape sugar; Fermentation; Wine-making; Beer-brewing; preparation or distillation of spirits — preparation of vinous mash and distillation of the vinous mash; Bread baking; Manufacture of vinegar; Preservation of wood; Tobacco; Technology of essential oils and resins; Cements, lutes and putty

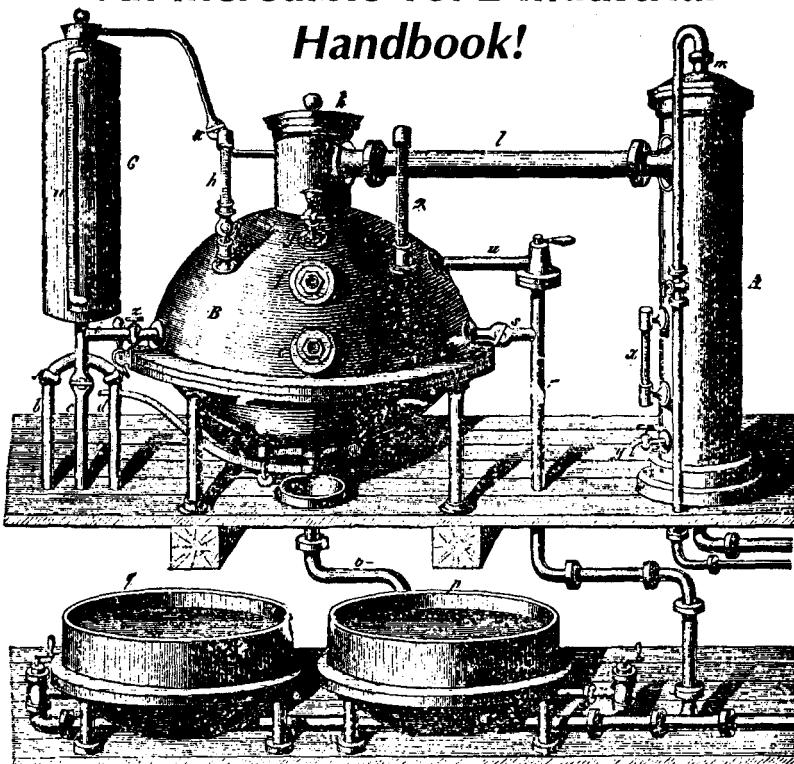
- **Division V** — Animal Substances and Their Industrial Application - Woollen industry; Silk; Tanning; Glue Boiling; Manufacture of Phosphorus; Requisites for producing fire; Animal charcoal; Milk; Meat

- **Division VI** — Dyeing and Calico Printing - Aniline colours; Carbolic Acid colours; Naphthaline pigments; Anthracen pigments; Pigments from Chinchonine; Red Pigments occurring in plants and animals; Blue dye materials; Yellow dyes; Bleaching; Dyeing of spun yarn and woven textile fabrics; Printing of woven fabrics

- **Division VII** — Materials and Apparatus for Producing Artificial Light- Artificial light from candles; Illumination by means of lamps; Gas; Paraffin and solar or petroleum oils; petroleum

- **Division VIII** — Fuel and Heating Apparatus - Fuel; Wood; Peat; Carbonized peat; Brown-coal; Pit coal or coal; Petroleum as fuel; coke; artificial fuel; gaseous fuel; heating apparatus; heating dwelling houses; boiler heating and consumption of smoke

An Incredible 1872 Industrial Handbook!



CHEMISTRY

HANDBOOK OF CHEMICAL TECHNOLOGY 1872

by Rudolf Wagner
translated by William Crookes
reprinted by Lindsay Publications

In the 1872 German chemists were world famous, and Wagner's Handbook was the master reference for chemists the world over. This translation of the eighth German edition can be yours for much less than an original copy should you be able to find one.

And what a book it is!

You'll learn early and/or simple ways of making chemicals, refining metal, formulating glue, paper, dyes or just about anything else chemical in nature. I have never seen such a comprehensive collection of incredible technological detail in a single volume anywhere else.

Want to refine iron ore into steel? Want to make sulphuric acid? And use it to make explosives? Care to brew beer? How about a batch of whiskey? A loaf of bread? And on, and on, and on. You get a whole encyclopedia in a single volume — 745 pages of small type with 336 illustrations mostly of manufacturing apparatus.

This is not really a cookbook. You won't find step-by-step instructions. But you will find more detail on a wider

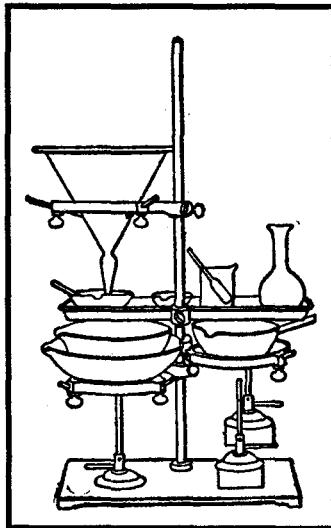
variety of basic essential processes (many of them made obsolete by more complicated processes) than in any other volume. For instance, if you're investigating the tanning of hides, making illuminating gas, charcoal, soap, or anything else, you'll find that this single volume can provide more information in less time than a search through most libraries for a month of Sundays.

Yes, this is an expensive volume, but you actually get more than what you pay for. This is quality. Today we have sophisticated, hi-tech processes that are closely guarded industrial secrets. Here you learn how it was done before large corporations and PhD chemists took over production. Be warned, though. This is old world thinking. You run the risk of poisoning yourself. These methods can be and probably are dangerous.

This incredible classic text will definitely fill a void in your reference library. I've never seen anything like it. And it's almost a sure thing you haven't either. It's expensive, but it's worth every penny and then some. Order a copy. You won't be disappointed.

5 1/2 x 8 1/2 hardcover 745 pages
332 illustrations
Cat. no. 4996
\$29.95

CYCLOPEDIA OF FORMULAS



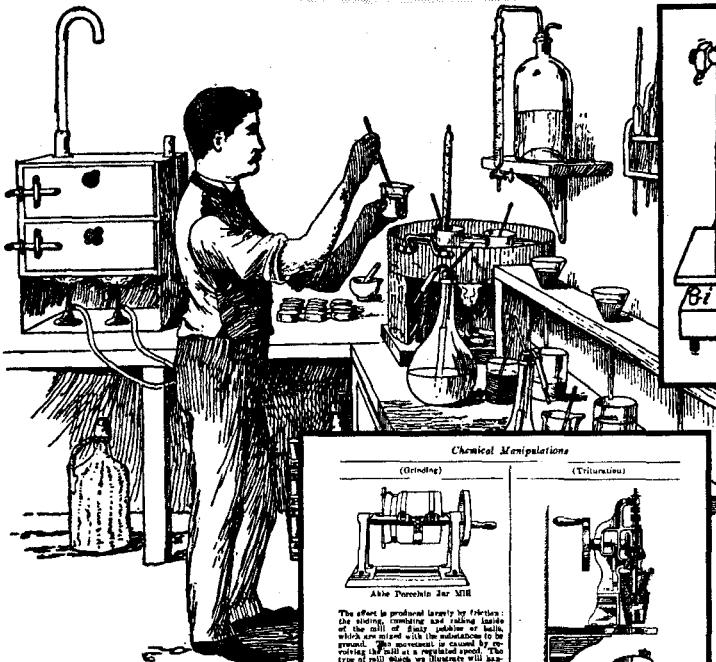
THE SCIENTIFIC AMERICAN CYCLOPEDIA OF FORMULAS SERIES

In 1912 Munn & Co. published a enormous books of formulas for almost every imaginable concoction a person might need. Editor Albert A. Hopkins, query editor of the *Scientific American*, compiled this incredible collection 15,000 formulas drawing on, in part, the 28th edition of *Scientific American Cyclopedias of Receipts, Notes and Queries*. The original copyrights run from 1891 through 1910, and the material they cover is brilliant.

I've debated for quite some time about reprinting this book. To reprint almost 1100 pages in a single volume would be astronomically expensive and would require a hefty price tag. No matter how low interest rates may get, I don't think you want to put a second mortgage on your house to buy a single book.

The solution is to break the main book into nine pieces and reprint the series over time. You can collect all the volumes piece-meal, or buy just the volumes you're interested in. Breaking it into pieces makes it easier for everyone to get access to this information.

And there is another problem. One section has missing pages. This well-worn volume came out of a library some time



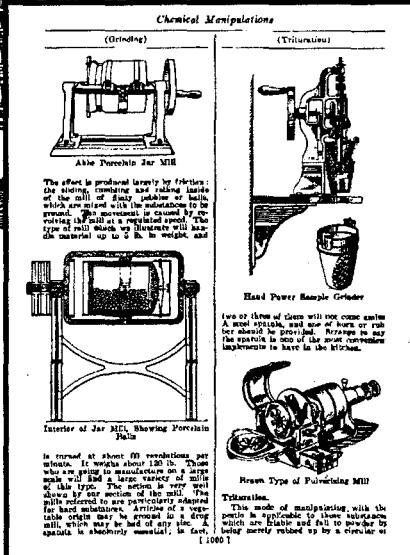
Nine Volumes! A total of 15,000 Formulas!

ago. One of their Neanderthal patrons (and that may be a compliment) decided to remove a few pages with a razor blade. The pages are gone. We have an active search underway to borrow another copy so that we can photograph the missing pages. (If you are one of those lucky people who has a copy. Contact us. We'll make you a generous swap of books from the catalog for use of your volume). In the meantime, we can get started bringing these formulas back to life. In the unlikely event that the damaged section is significantly delayed, we'll at least have the rest of formulas to use.

It's a great series. One worth having.

SCIENTIFIC AMERICAN CYCLOPEDIA OF FORMULAS Vol 9 – Chemical Manipulation
edited by Albert A. Hopkins

You get explanations, and in some cases illustrations, of labo-



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THE CHEMISTRY OF POWDER

AND EXPLOSIVES VOL 1

by Tenney L Davis

reprinted by Lindsay Publications

Here you get a textbook written for fourth-year and graduate chemistry students at MIT, and first published in 1941. Tenney explains in his preface, "No effort has been made to describe the use of explosives in ammunition and in blasting beyond the minimum description which is needed to make clear the modes of their behavior, and no account has been included of the chemical-engineering aspects of their manufacture." In other words he won't show you how to make explosives or detonate them.

But! This is the definitive text on one of most interesting classes of chemical compounds in common use. The energy that can be quickly and violently released by nitrogen bonds is fascinating even to non-chemists.

You'll learn about the properties of explosives, how they're classified, how an explosion propagates, the velocity of detonation, the Munroe effect, the detonating fuse and more. You get the history and chemistry of black powder and then fireworks including railway fuses, flares, picrate whistles, stars, roman candles, pinwheels, bombshells, toy caps, silver torpedoes, railway torpedoes, sparklers, snakes and much more. Visit a Chinese firecracker factory! Finally, learn about aromatic nitro compounds

such as tri-nitrobenzene, trinitrotoluene (TNT), Ammonium Picrate, Butyl Tetryl, and many others.

Most of these compounds are described in terms of their melting points, who developed them, their uses, and often a rough outline of their manufacture. Even for the non-chemist it's interesting reading.

The classic explosives book! Consider it carefully. Something unusual for your reference library that you won't find on sale at your local newstand! Get a copy! 5



CHEMISTRY OF POWDER & EXPLOSIVES!

1/2 x 8 1/2 sewn pages with paper cover - 232 pages - well illustrated

Cat. no. 20420 \$8.95

CHEMISTRY OF POWDER & EXPLOSIVES VOL 2

Learn about nitric esters such as methyl nitrate, pentyl, nitro-glycerin, nitrosucrose, and the secrets of smokeless powder: history, classifications of colloided nitrocellulose powders, the manufacture of single-base powder, stabilizers, transformations during aging, flashless charges,

and more. Learn about dynamite, blasting gelatin, Sprengel explosives, liquid oxygen explosives, perchlorate explosives, military ammonium nitrate compounds and more. Next, it's the nitroamine class of explosives, such as urea nitrate, guanidine nitrate, ethylenedinitramine, and others. Finally, learn about fulminating compounds, detonators, lead and silver azide, nitrogen sulfide, tetracene, friction primers, percussion primers and more.

This second volume was re-

leased two years after the first. Fascinating reading! Put a copy in your library. 5 1/2 x 8 1/2 sewn pages, paper cover - 312 pages Cat. no. 20439 \$9.95

HISTORY OF EI DUPONT DE NEMOURS POWDER COMPANY

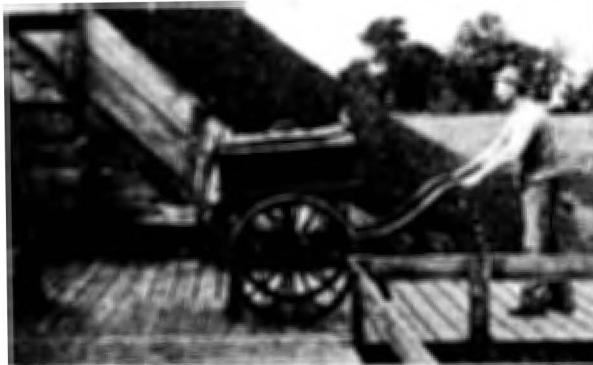
by Banker & Investor Magazine
reprinted by Lindsay Publications

The duPonts made their fortune making gunpowder for the U.S. government. Samuel duPont's son, Eleuthere Irénée (E. I. duPont), was out of a job as manager, so he became a student of the great French chemist, Lavoisier, and later took a job at the French Government Works, learning the manufacture of explosives.

Both duPonts came to the U.S. in 1800, and were asked to set up the first high-quality powder factory in the new country. Being the only defense contractor to offer the government powder, the duPonts earned \$50,000, an outrageous fortune, their first year! They were on their way.

This 1912 history of the company

covers the problems of powder and its manufacture, the plants they built, and the history of explosives in general, including mention



of a nitroglycerin factory in Glasgow turning out 50 million pounds of nitro each year!

You get pictures of the ruins of the first powder mill, a letter from Thomas Jefferson, their early salt-peter refinery, men wheeling carts of nitro, the acid plant at Louviers CO, experimental black powder press house, experimental equipment for purification of nitro, and much more.

Making explosives is a great way to get yourself killed. Not only did these people do it for a living, they got rich! This is part history, part technology, and part advertising. Interesting stuff! Get a copy! 5 1/2 x 8 1/2 paperback 224 pages Cat. no. 20579 \$9.95

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My computer IS incredibly fast. So help me feed it the right numbers so we can get your order to you FAST!

Thanks!

BLOW IT UP!

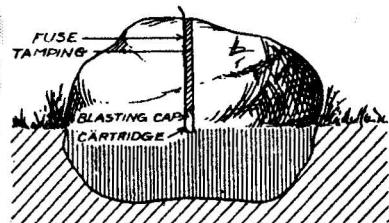


BLAST THAT SUCKA to kingdom come....

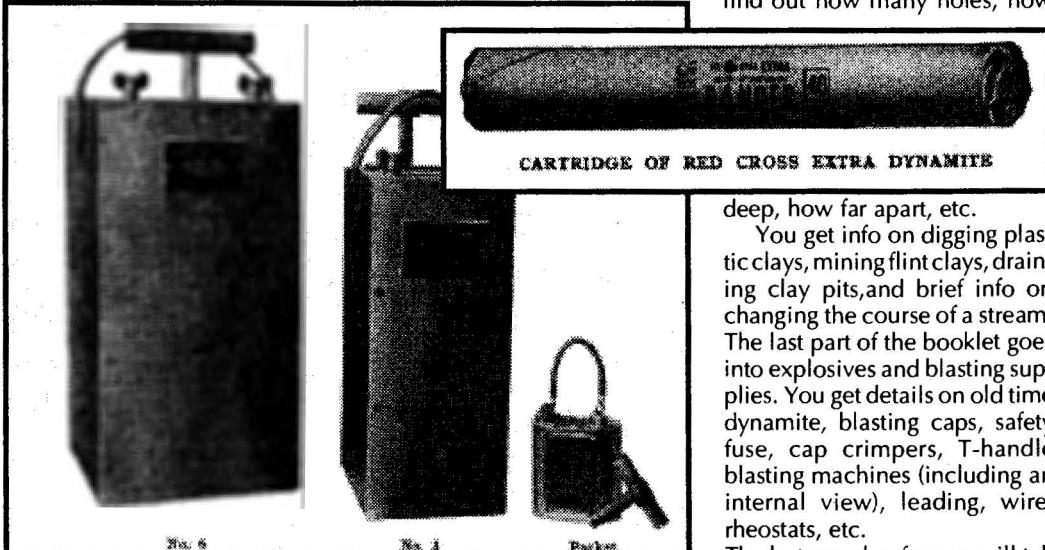
EXPLOSIVES FOR SHALE AND CLAY BLASTING

by E. I. DuPont deNemours
reprinted by Lindsay Publications

So yer gonna dig a hole in the ground, huh? To bury your mother-in-law perhaps? Need some help? Try dynamite.



Getting down to shale is easy too. "Usually, for shallow faces and flat stratification, the best practice is to punch vertical holes from the top of the bench.... Red Cross Extra dynamite 20 per cent. to 40 per cent. strength is recommended..." You'll find out how many holes, how



Some of the biggest holes in the ground were dug to extract clay for making brick and tile. Dynamite makes excavation faster and easier. In 1916 DuPont published this booklet to entice you to use their dynamite.

You'll be shown how to clear the land of stumps and boulders. Then you bore holes to displace overburden to get to the clay. Once that's done the steam shovel can get in and mine the clay.

you how to dig post holes with dynamite and how to handle a misfire.

Interesting. You could probably get enough info to build a replica of a blasting machine and dynamite sticks to scare the hell out of door to door salesmen! (Just don't take it to the airport. You'll do time...) An old book, but dynamite is still dynamite. Unusual. 5 1/2 x 8 1/2 booklet 48 pages
Cat. no. 21257 \$4.95

HERCULES DYNAMITE ON THE FARM - DITCH BLASTING

by Hercules Powder Company
reprinted by Lindsay Publications

"... It is true that due respect must be paid to the power stored in a cartridge of dynamite or a cap; but millions of pounds are used annually in this country with comparatively few accidents." Who knows how much is used now?

You'll learn about the selection of explosives and blasting supplies. Learn about Hercules products of 1934 such as Hercotol, Hercules Ditching Dynamite, Extra Low Freezing Dynamite, Hercomites 2 to 7, blasting caps, safety fuses, and blasting machines — you know, the

T-handle device used to detonate the charge. You may want to have a Ohmmeter-Galvanometer, a rheostat, leading wire, cap crimping pliers with fuse cutter, and other equipment.

Chapters include priming methods, lighting fuse, hangfire and misfires, how to handle frozen dynamite, storage of explosives, transportation of explosives, safety, and of course, the last half of the book concerns itself with laying out and blasting ditches.

Make yourself a moat! Keep the neighbors awake at night! If you intend to blast, stay away from me. Interesting reading! 5 1/2 x 8 1/2 paperback 64 pages
Cat. no. 20480 \$4.95

**MANUAL OF FORMULAS,
RECIPES, METHODS AND SECRET PROCESSES**
*edited by Raymond Wailes
reprinted by Lindsay Publications*

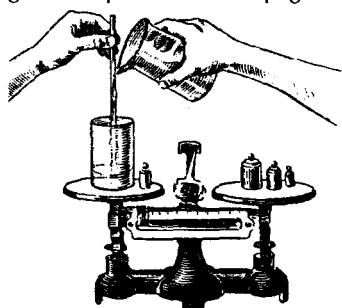
Here's a great low cost collection of hundreds of formulas on just about every subject you can imagine compiled from the pages of Popular Science Magazine and published in 1932. You can make soap bubble liquids, solidified gasoline, waterproof matches, lacquer for brass, silver solder, photographic printing paper, slow-drying putty, blackboard paint, thermite welding mixtures, pewter alloy, garden sprays, soaps, preparations for dance floors(?), concrete waterproofing compound, fireworks, cosmetics, adhesives and much more.

You'll learn how to mix up compounds for polishing and plating metal. Learn how to blacken brass, blue steel, to make silver nitrate from old spoons, mix up low temperature alloys, dry flowers, brew wine, re-ink typewriter ribbons, make blueprint paper, dye cloth, make flypaper and much more.

Unlike other formularies, this one is new enough to be useful and old enough to have unusual formulas. And the price is quite reasonable compared with the large volumes which are interesting but often contain many formulas that are of little practical value. An interesting book of definite value. Worth having. Order a copy today. 4 1/2 x 8 paperback 250 pages

Cat. no. 20366

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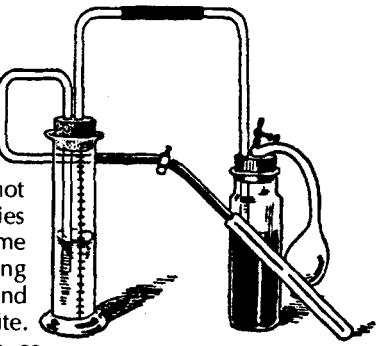
MANUAL OF FORMULAS

A THOUSAND AND ONE FORMULAS – THE LABORATORY HANDBOOK FOR THE EXPERIMENTER
*by Sidney Gernsback
reprinted by Lindsay Publications*

Back in 1920 people were hot to set up their own laboratories and invent something and become rich. Experimenter Publishing Company published books and magazines to whet their appetite.

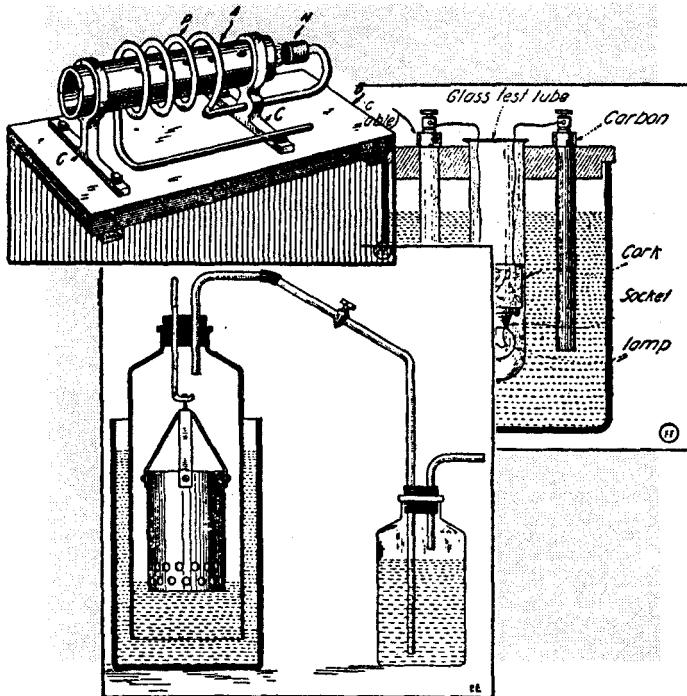
Here you get formulas on cements and glues, compositions of all kinds, glass and glass working, inks, leather polishes, metal-craft, perfumes, soaps, photography, blue-print and other papers, plating, pyrotechny, polishes and stains, varnishes and paints, cleaning compounds, wood-craft, chemical lab hints, mechanical lab hints, electrical lab hints, miscellaneous formulas and an appendix.

Not everything here is useful in my opinion, and some of it is downright dangerous. Some of this looks like it came out of the Boy Mechanic books. Learn how to convert coin silver into pure silver, formulas for solders, lithographic ink, how to make a gasoline torch, recipes for killing flies, an experiment with thermit, hand grenades



1001 FORMULAS

A Laboratory Handbook for the Experimenter



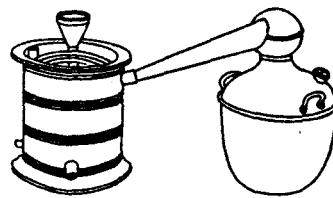
You get formulas and instructions for making everything from acid-proofing compounds to preservation of yeast. You get a big thick hardcover book (one helluva bargain) covering anti-septics for caged birds, aquarium putty, beer, blue bronze, casket trimmings, clock oil, enamel varnishes, glass etching, marine glue, fireworks, inks for hand stamps, jeweler's alloys, attaching rubber to metal, pickling brass like gold, polishes for aluminum, removal of corns, sarsaparilla beer, skin cream, stove blacking, coloring billiard balls red, waterproofing blueprints and thousands more.

The index is set in really small type and is 23 pages long! Some of the formulas, no doubt, are not too useful anymore. And many of these formulas may be downright dangerous. So you're on your own.

If you're into this kind of thing, get a copy. You're a fool if you don't. It's not all that hard to find an original copy, but this price is a give away! Standard volume of old formulas. Order one now. 6x9 hardcover 809 pages

Cat. no. 578

\$12.95



???, flashlight powder like the old photographers once used, methods to copper-plate carbon motor brushes, and on and on.

A lot of this is quaint, and not directly useful. It's for kitchen chemists. But a few of the formulas and ideas are worth the entire price of the book. If you're trying to build a master reference library of unusual secret formulas, this book is certainly worth considering. Check it out. I wouldn't have reprinted it if I didn't think it had merit. Fun reading if nothing else. Get a copy! 5 1/2 x 8 1/2 paperback 160 pages

Cat. no. 20811

\$8.50

Manufacture of Whiskey, Brandy and Cordials

MANUFACTURE OF WHISKEY BRANDY & CORDIALS

by Irving Hirsch

reprinted by Lindsay Publications Inc

You'll find books on making wine and beer in lots of different places. But finding books on making booze, good, drinkable booze (if there is such a thing...) are almost non-existent. I suspect it has to do with taxes. Making booze is illegal without a government permit. What you get here are the secrets of making booze that you're not supposed to know!

In 1937 the author, a chemical engineer, put together this industrial handbook to teach others how to produce hard stuff. Prohibition had ended, but the Great Depression hadn't. I guess there wasn't much to do but drink...

Chapters include whiskey, treatment of grain, rye whiskey, distillation of liquors, distillery equipment and appliances, manufacture of brandy, of applejack, of pear brandy, of slivowitz, of fruit brandy, of rum, of gin, of miscellaneous liquors, of cordials, blending, maturing of spirits [very important], artificial maturing of spirits [trade secrets?], clarifying liquors, water, sugar and syrup, coloring and much more.

We're not talking about

INCREDIBLE CHEMICAL CROSS REFERENCE!

Decode Obsolete Old-Fashioned Chemical Names

LINDSAY'S CHEMICAL CROSS REFERENCE

by Lindsay Publications Inc

If you haven't run into the problem yet, you will. You'll be reading some old chemical formula calling for mirbane oil, salt of saturn, or liver of sulphur. A quick check of this handy list of chemical terms would tell you that you need nitrobenzene, lead acetate, or potassium sulphide.

What we did was enter into our computer two thousand chemical equivalents gleaned from a variety of chemistry textbooks, industrial references, and formularies in our reference library dating back to the early 1800's. The computer merged and sorted the lists into alphabetical order. The result is a chemical cross reference.

We have kept unusual and probably incorrect spellings. We have made no attempt to verify that the definitions are correct. What we have done is provide you with one master list of the best equivalents we could find. We've already found it useful, and you will too. Get a copy for your reference library. 5 1/2 x 8 1/2 paperback 44 pages

Cat. no. 20170

\$5.95

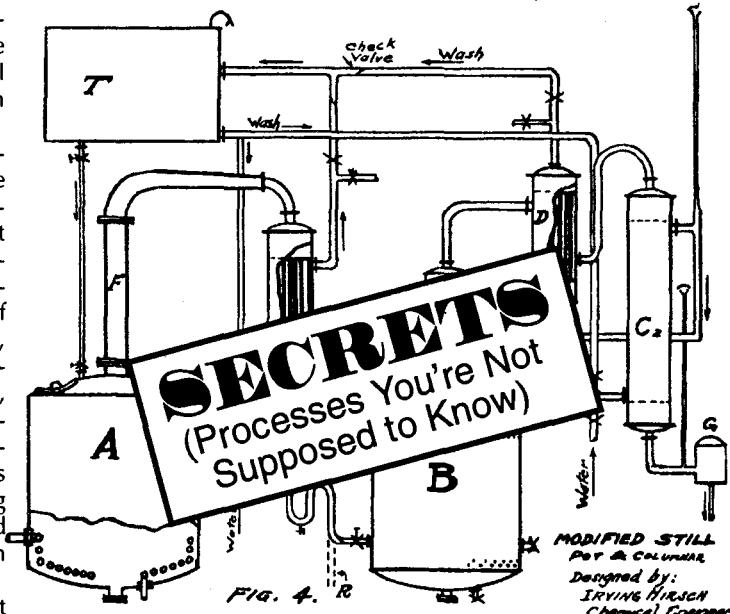
small moonshine stills. And dis ain't "white lightnin'" that tastes like liquid fire. This is good stuff. We're dealing with big stills and big processes the way the pro's did it and are probably still doing it. You get diagrams of many different types of stills, condensers, filters and so on. You get recipes for everything from gin to creme de cocoa. You get useful tips on blending scotch whiskies, problems that occur if whiskey stays in bond too long, problems with sweating casks and much more.

I'll never make my own booze. I'm too lazy, I guess. Nevertheless I found this book interesting because this kind of information that is never published. It's passed on through apprenticeships. The text is typewritten, and the illustrations are industrial. I get the overpowering feeling that this is information that the government and especially the distilling industry wants to keep to itself.

Excellent, rare information. An interesting book on something that people have enjoyed and gotten into trouble with since the beginning of time. Get a copy and enjoy it. But don't get into trouble. Order a copy today! 5 1/2 x 8 1/2 paperback 183 pages

Cat. no. 20935

\$9.95



Make Soda Pop!

Make your own soda! It's easy! And it's great soda!

Build this remarkably simple device using hardware store components, hook it to a bottle of carbon dioxide, and you're ready to make soda. The major expense is the CO₂ tank and its regulator. But you'll quickly recover that cost in a single summer.

You can make great root beer, carbonate Kool-Aid, Coca-Cola, and other drinks at bargain prices. You can make gallon after gallon of soda water for ice cream sodas or for mixing with your favorite scotch. Experiment!

It's one of the most useful and popular machines (at least with the kids) I've ever built. A single small tank of CO₂ last me about a year, and that's an ocean of soda. Each jug is very inexpensive. Get a copy, and build a soda pop machine! 5 1/2 x 8 1/2 booklet 22 pages

Cat. no. 88

\$3.00

MAKE BOOZE!

**Vodka
Gin
Brandy
Rum
Scotch
Bourbon
and more!**

TESLA'S EXPERIMENTS

with High Potential & High Frequency

EXPERIMENTS WITH ALTERNATE CURRENTS
OF HIGH POTENTIAL & HIGH FREQUENCY
by Nikola Tesla

"A lecture delivered before the institution of electrical engineers, London, by Nikola Tesla with an appendix by the same author on the transmission of electric energy without wire, reviewing his recent work, and presenting illustrations from the photographs never before published".

Quite a title! Quite a book! There's so much written and published about Tesla (and too much of it is pure garbage), that it is refreshing to have the inventor himself explain his experiments, theories, and plans. It's all here, every page from the original 1904 book — complete with unusual illustrations showing disruptive discharge coils, improved discharger and magnet, luminous discs, single wire and no wire motor, unusual electric lights for use with the high-frequency AC that is generated by the Tesla coil, and much more.

The last fourteen pages of the book is a reprint of Tesla's article from the March 5, 1904 issue of "Electrical World and Engineer" complete with photographs of the experimental apparatus at Colorado Springs and Long Island built to test the transmission of electrical power without wires.

Anyone who studies Tesla, builds his coils, or wants to perfect the inventions that Tesla didn't have time to finish should have a copy of this book. The writings of Tesla himself should be the cornerstone of any Tesla library, and here is your chance to get your own copy of this now-rare book. Interesting reading. Historically important. Get a copy. 5 1/2 x 8 1/2 paperback 170 pages. Cat. No. 4392

HIGH FREQUENCY APPARATUS

by Thomas Stanley Curtis
reprinted by Lindsay Publications

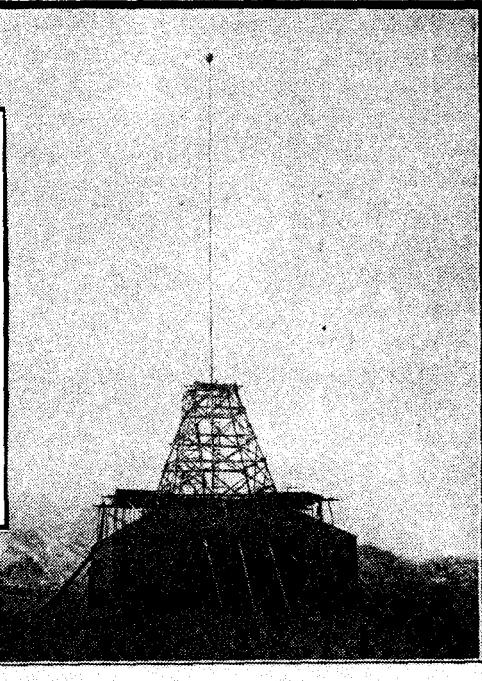
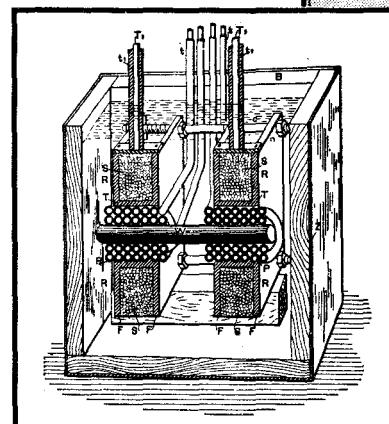
By 1916 so much interest in induction, Tesla and Oudin coils had been generated by Electrician & Mechanic, Popular Electricity and Modern Mechanics, and The World's Advances magazines, that Curtis knew his book and high voltage equipment he manufactured would be a hit.

Because of their very nature, magazines could publish only brief articles on these lightning bolt generators. Curtis went the other extreme, and packed "Apparatus" with as much detailed information as he could find. Then he added suggestions for experiments and dozens of illustrations. The result is now a classic book, and original copies are so coveted that they're difficult to find.

You get wall-to-wall how-to on coil construction. Tips on calculating windings, winding coils, making transformers, interrupters and spark gaps, and even the power transformers that drive the spark gap.

If you want to die young, you can build an X-ray apparatus. Use it long enough, and you and everyone in your apartment building will glow in the dark!

Build a grid and see for yourself if high frequency current really does affect plant growth. Build yourself a large coil that produces 50" lightning bolts, give lectures, and make people think you are a genuine made scientist.



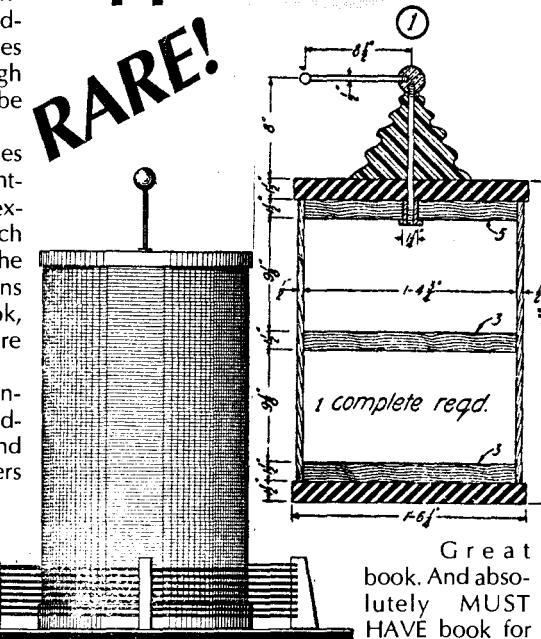
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Power transmission without wires: the London Lecture plus a 1904 magazine article on the Colorado Springs experiments! Rare book!

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- 12 Physicians' Office Equipment
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- 14 Notes for the Beginner in Electro-Therapeutics
- 15 Plant Culture with High Tension Current
- 16 High Frequency Plant Culture
- 17 A Foreword on the Construction of Electrical Apparatus for the Stage
- 18 Construction of Large High Frequency Apparatus
- 19 Large Tesla and Oudin Coils for the Stage
- 20 Construction of a Welding Transformer
- 21 Hints for the Electrical Entertainer Appendix Parts and Materials – How Much They Cost and Where to Get Them

**INVENTIONS, RESEARCHES &
WRITINGS OF NIKOLA TESLA**
by Thomas Commerford Martin
reprinted by
Lindsay Publications Inc

The greatest world's fair ever constructed was underway in Chicago in 1893. More electricity and more electric lights were used in the fair than in the entire city of Chicago. It was the electric age, and Edison was doing with commercial battle with Westinghouse and its star, Nikola Tesla.

In 1893, this volume, a comprehensive collection of Tesla's work to that point, was published. And although it is now quite rare, you can have a high quality reprint for a small fraction of what cost us to obtain an original copy.

Most people think of lightning generators when they think of Tesla, but that's a very narrow perspective. People should think of alternating current. Tesla created the power system used throughout the world today — one that operates at 50 and 60 cycles per second.

Tesla experimented with other frequencies, iron and air core transformers, as well as motors and generators. Tesla didn't just one day decide he was going to build his famous lightning bolt generator. It was but another step in a series of experiments that had begun years before. Here you get a complete record of this research up to 1893.

It's all here — the AC experiments and inventions that lead Tesla to experiment with ever higher voltages and frequencies, the neon tubes and fluorescent lights, unusual high frequency alternators and even magnet motors.

If you want to carry on Tesla's unusual research, you must walk in his footsteps. You must do your homework. Here in one volume is the early work that will help you get your mind in sync with his and perhaps suggest what he was thinking at the time, and give you ideas of where to take his experiments.

Every Tesla fan, every high voltage experimenter, and every electrical engineer should have a copy of this classic book. Just as much as Edison, Tesla created the world in which we live today. Now you can study the results of his research, attend his special exhibitions, and devour his lectures, with this single volume. Order a copy today! 5 1/2 x 8 1/2 paperback 496 pages

Cat. no. 4902 \$17.95

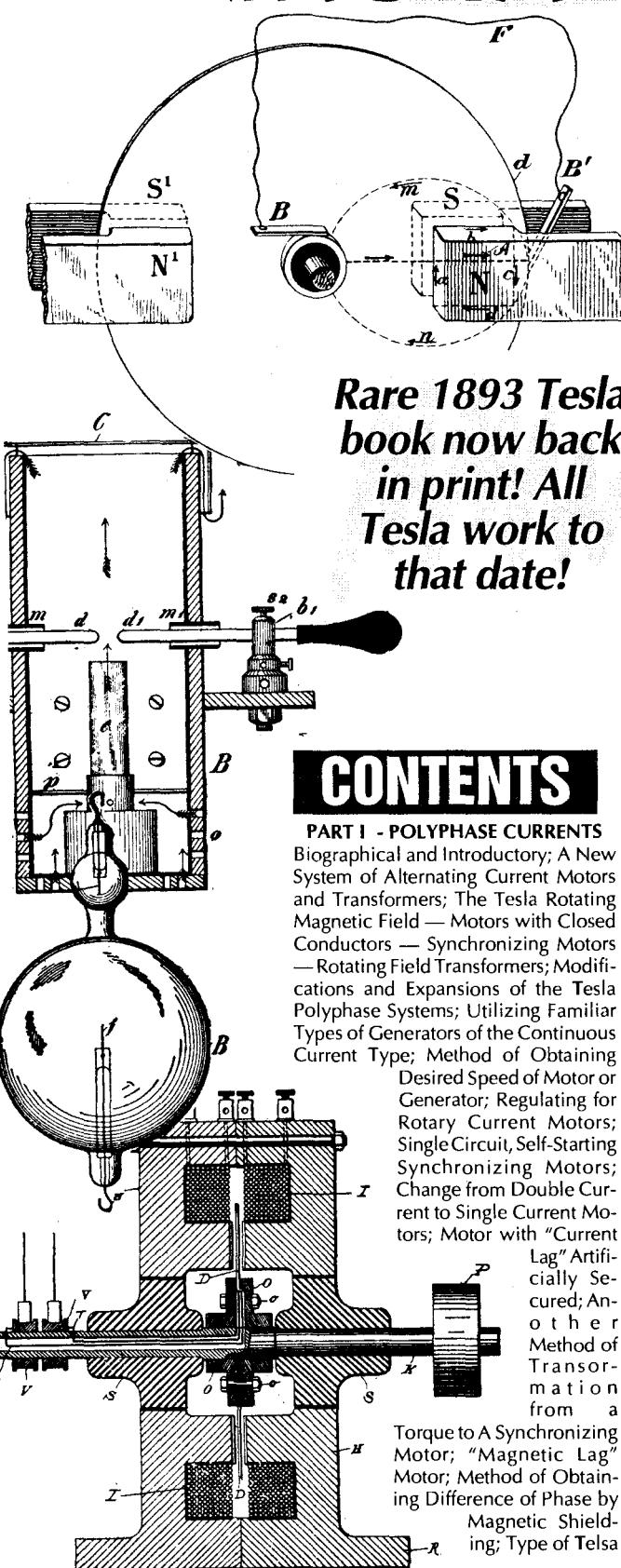
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Inventions, Researches & Writings of

NIKOLA TESLA



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Desired Speed of Motor or Generator; Regulating for Rotary Current Motors; Single Circuit, Self-Starting Synchronizing Motors; Change from Double Current to Single Current Motors; Motor with "Current Lag" Artificially Secured; Anothe Method of Transformation from a

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PART II

TESLA EFFECTS WITH HIGH FREQUENCY AND HIGH POTENTIAL CURRENTS

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PART IV

APPENDIX ON EARLY PHASE MOTORS AND THE TESLA OSCILLATORS

Mr. Tesla's Personal Exhibit at the World's Fair; The Tesla Mechanical and Electrical Oscillators.

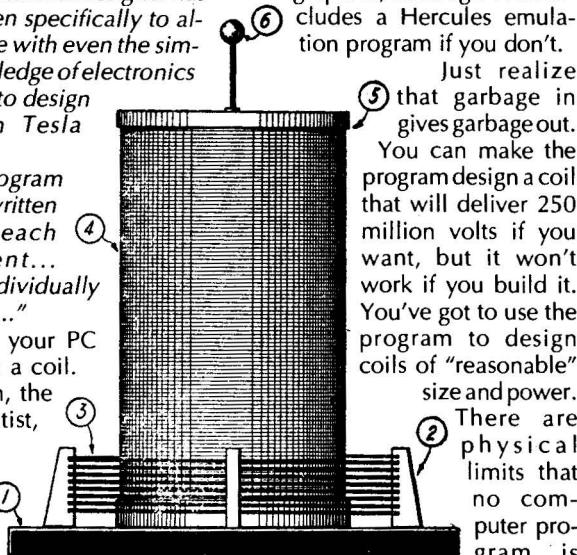
THE TESLA COIL DESIGNER

by Walt Noon

"The Tesla Coil Designer has been written specifically to allow anyone with even the simplest knowledge of electronics to be able to design their own Tesla coil..."

The program has been written so that each component... can be individually calculated..."

Fire up your PC and design a coil. Walt Noon, the mad scientist, will provide you with a quality



copied to your hard disk for execution. You'll need at least CGA graphics, although Walt includes a Hercules emulation program if you don't.

Just realize (5) that garbage in gives garbage out. You can make the program design a coil that will deliver 250 million volts if you want, but it won't work if you build it. You've got to use the program to design coils of "reasonable" size and power. (6) There are physical limits that no computer program is

Tesla Coil Design Computer Program

design program that offers more sophisticated design features than programs offered at twice the price.

You get a 5 1/4 floppy and a small booklet which walks you through the design of a 200,000 volt Tesla coil. The program is not copy protected, and can be

going to know about. Coils giving 40" arcs have been easily designed and successfully built.

The price is right for this time saver. If you build coils, consider this carefully. One floppy and one 5 1/2 x 8 1/2 booklet
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- **Highly Accurate**
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Newest version includes calculations for top capacitance, toroidal terminals, spark gap design, and additional graphics.

What Coil Builders are Saying...

Dear Mr. Noon:

Thank you very much for the Tesla Coil Designer program. I found it very easy to learn and A HUGE TIME SAVER! The hours I used to spend calculating design parameters are now spent comparing various design limits. I have found your Designer to be extremely accurate in predicting coil frequency and discharge in the coils I have built since purchasing your program.... I have been very pleased with the way the program operates...

Richard T Quick, Glendale MO

Walt:

I purchased your IBM PC Tesla Coil software back in May, and I like the software very much...

Kim Kochersperger, Kokomo IN



Tesla Coil Handbook

TESLA COIL HANDBOOK

by Todd A Pringle

"Introduction to Theory, Design and Construction of Air-Core Resonating Transformers".

So much of what you find published on Tesla coil construction is just a rehash of past projects. The accounts are often badly polluted with mistakes, completely wrong rules-of-thumb, and old-wives' tales. Many plans will actually take you down in the wrong path.

Pringle, an electrical engineering student, has done an excellent job of clearing the air. He'll hit you with theory that is accurate but not overpowering. You'll learn the truth about coils and the problems often faced in their construction - problems that often interfere with optimum operation of the coil yet are not



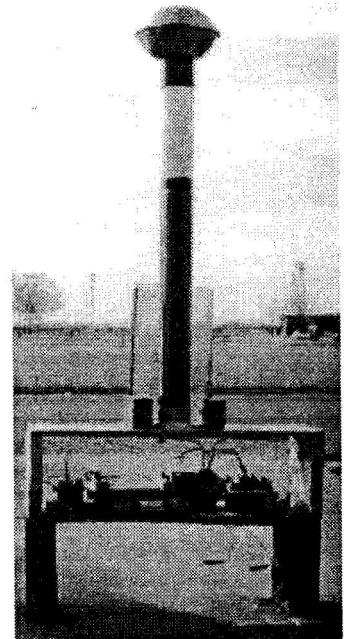
You'll learn about 1/4 wave principle, the Ferranti rise, capacitors, power transformers, spark gaps and all the other components of a coil. You'll learn about design parameters and procedures, tuning and operation, sample design, and more.

If you don't know by now, Tesla coils can be dangerous and downright lethal. The author just for good measure throws in a set of plans for a Jacob's ladder should you decide you don't understand enough to safely build a coil.)

And you get plans, specs, wiring diagrams, and a couple of photos of a coil with a 40" x 4"

secondary coil capable of throwing 28" sparks. The info on this coil alone is worth the price of the book.

You get formulas, simple explanations of complex theory, advice from someone who has built a coil and who has far more theoretical background than most of us, plans, and suppliers of parts, and valid coil theory.



You get quality. This isn't the biggest book, the cheapest, or the most professional in appearance, but you get value. This delivers accurate information without the BS so often seen in other Tesla coil publications. I hope this becomes just the first step in a series of Tesla coil books from Pringle. I think you'll like this. Worth having. Order a copy! 8 1/2 x 11 booklet binding 60 pages
Cat. no. 3007 \$9.95

Electricity at **HIGH PRESSURES & FREQUENCIES**

ELECTRICITY AT HIGH PRESSURES AND FREQUENCIES

AND FREQUENCIES by Henry L. Transtrom

reprinted by Lindsay Publications

This off beat book on high voltage appeared in 1913 and was revised again for publication in 1921. Its chapters have no names. There appear to be 139 illustrations.

The entire first part of the book covers electrical theory on electricity, how it is produced by generators, ideas of induction, ampere-turns, frequency and the phase shift that occurs through reactive elements and much more. This isn't heavy stuff — practical theory that builders can use, more or less translations of "heavy" engineering theory. This is great material for the experimenter in induction coils, Tesla coils, Oudin coils, and other lightning bolt generators.



TESLA COIL SECRETS

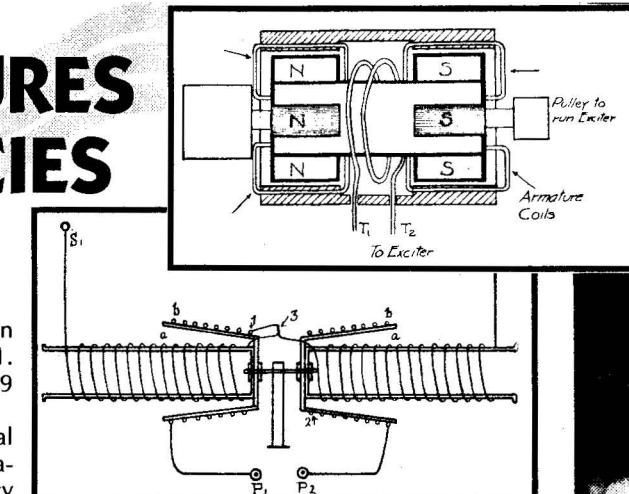
SECRET
by R. A. Ford

Be the first on your block to blast your neighborhood with high voltage! Shock the socks off your friends and relatives! Zap those pesky cats digging in the garbage can! Make people think you really are building a Frankenstein monster in your basement!

A Tesla coil is a resonant, air-core, high-voltage transformer developed by Nikola Tesla at the turn of the century to generate lightning bolts and to investigate the wireless transmission of electrical power.

Now you can dig through the private scrapbooks of an avid Tesla researcher who has built several coils. You can study his collection of articles, clippings, and notes that took years to assemble. You'll see all the interesting hints, plans, and wiring diagrams gleaned from early magazines that ceased publication decades ago along with formulas, notes, and observations he believes are important for building powerful coils. Many of the old articles are so detailed that you can probably use them to build a powerful experimental coil. There are notes on one machine the could kick out five foot lightning bolts!

If you're really into Tesla coils, you may have seen a few of these clippings already.



show you a Fessenden alternator driven by a 10 hp DC motor through gears that revolves at 20,000 rpm that kicks out over 2,000 watts of high-frequency high

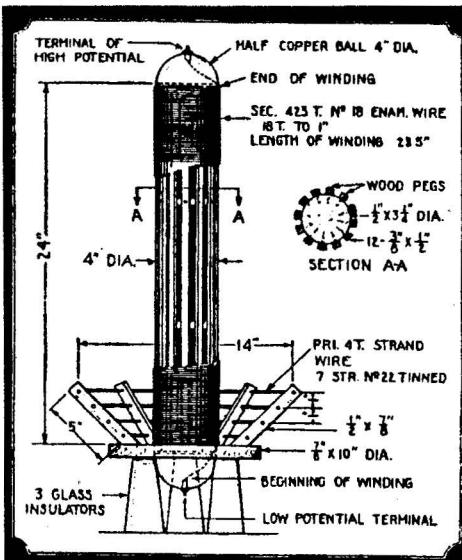
You'll then read about capacitive machines. You'll see a device that develops 15,000 volts between two ends of 25 feet of No. 4 aluminum wire! Another photo shows a 10 volt 5 watt Mazda lamp is lit to full brightness although apparently short circuited by 6 inches of No. 00 copper wire! It shouldn't work, but it does. You'll see a high-frequency transformer that throws heavy 60" sparks between its terminals. Other photos show unusual high voltage experiments. The last 20% of this book is worth the price of the entire book!

This is another must have for the high-voltage library — a book that is very difficult to find in used book stores and so on. Get yourself a copy. You'll like it. Excellent book! 5x7 paperback 264 pages
Cat. no. 20544 \$11.95

Pages
\$11.95

TESLA COIL SECRETS

But I'll bet there are others you haven't seen. You'll get info on rotary spark gaps, anti-kickback devices, Leyden jar capacitor construction, conical Tesla coils, Oudin coils, and suggestions on research into wireless power transmission, plant growth stimulation, medical uses, and more.



Many of the reprinted articles are fuzzy and a few hard to read. Most have been enlarged to bring out the construction details, and have been reprinted in their entirety. The difficult searching has been done. You can spend your time building and experimenting.

Be warned! You'll be working with high-voltage high-frequency devices from another era. Tesla coils can be very dangerous. But maybe you can be the one to rediscover the secrets Tesla didn't have time to pursue or reveal.

Rare info! Too bad the book isn't ten times bigger. Get a copy for the reference library if for no other reason. Interesting reading. Recommended!

ommended!
5 1/2 x 8 1/2 paperback 74 pages
Cat. no. 4317

\$6.95

TESLA SYMPOSIUM

PROCEEDINGS OF THE
1990 INTERNATIONAL TESLA SYMPOSIUM
edited by Steven Elswick

Here's another collection of practical, experimental, and just plain loonie ideas related but limited to Tesla. Some of this is fascinating reading, some a rehash of material available elsewhere, and the raving of some people who claim that scientists are all wrong, and that they have the knowledge that will totally change the world. In other words, this is a three ring circus.

Included are the Tesla Museum, the AC/DC war, a great paper by Jim Hardesty on X-Rays and Electron Beams (see the video in this catalog), 100 Years of Cavity Resonator Problems, Rediscovery of Tesla's RF Techniques, Computer Aided Design of Tesla Coils, Active Antenna for ELF Magnetic Fields, Tesla Technology and Radioisotropic Energy Generation, Current Tesla Turbine Technology, Non-Hertzian Scalar Energy and EM Energy: The Biological Connection, Nikola Tesla: Father of Bioelectronics, and the "good stuff": Tesla Wave Physics for a Free Energy Universe, Engineering Intro to Zero Point Energy, Tapping the Zero-Point Energy and Scalar Current, Nonlinear Dynamics, Nonconventional Energy and Propulsion Methods, High Voltage Concentric Field Generator Design, Energy Phenomenon, Experiments in Synchronicity, and the Gary Magnetic Effect.

You get a well illustrated volume of interesting reading. It's expensive, but the material is hard to find and is the only published documentation of the 1990 Symposium held in Colorado. If Tesla and bizarre science is your thing, then this is definitely for you. Get a copy. 8 1/2 x 11 hardcover over 350 pages

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\$49.95

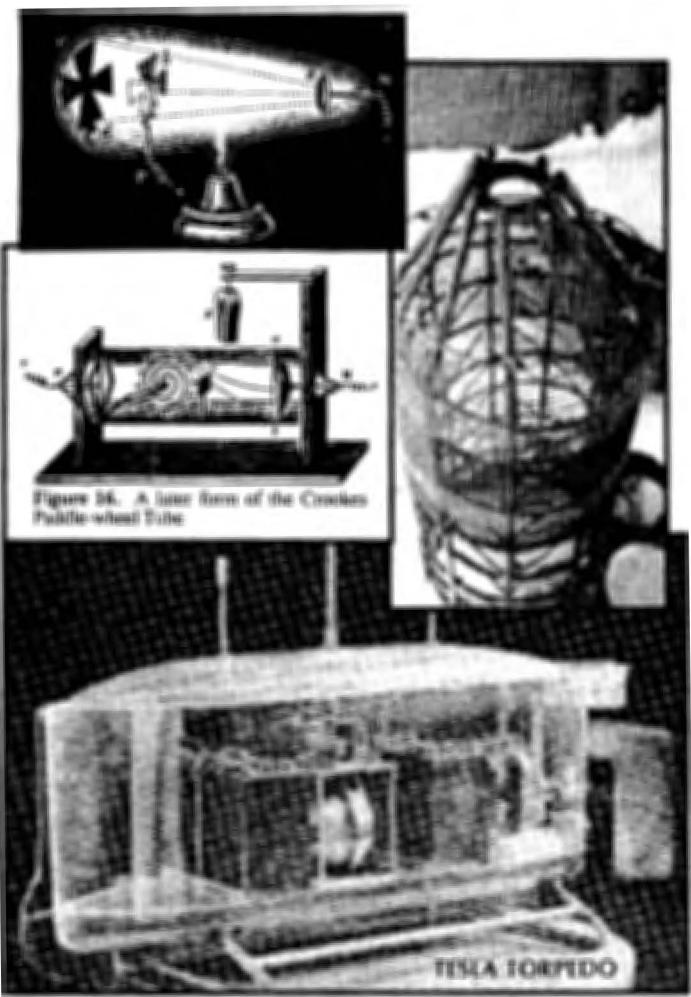


Figure 26. A later form of the Crookes Radiometer.

1988 Tesla Symposium

PROCEEDINGS OF THE
1988 INTERNATIONAL TESLA SYMPOSIUM

edited by S. R. Elswick

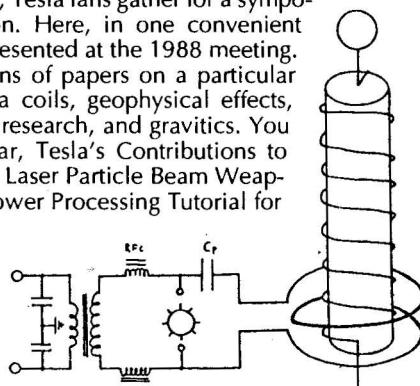
Every year in Colorado, Tesla fans gather for a symposium to swap information. Here, in one convenient volume, are the papers presented at the 1988 meeting.

Chapters are collections of papers on a particular topic: Tesla history, Tesla coils, geophysical effects, electromagnetics, energy research, and gravitics. You get the Great AC/DC War, Tesla's Contributions to Electrotherapy, History of Laser Particle Beam Weapons, Tesla Coil - An RF Power Processing Tutorial for Engineers, Computer Simulation & Experimental Verification of Tesla High Voltage Machines, Earth-Ionosphere Cavity Magnetic Field Spectra in the 3-30 hz Band, Demonstrating A Zero-point Energy Coherence, Phenomenon of Electric Charge Generation by Space Rotation, Studies on Rotation Leading to the "N" Machine, Recent Developments of Levitation, Maxwell's Lost Unified Field Theory, and ten more! Although not heavily illustrated, you do get a number of drawings, circuits, charts, and there is plenty of math in places.

This is an unusual book, to say the least. It is a must-have for Tesla fanatics, anti-gravity people, perpetual motion people, and the fringe-science crowd in the general. I can't tell where the hard science ends and the speculation and alternate science theory sets in. So you know it's unusual! It's expensive, but worth having. Consider it carefully. 8 1/2 x 11 hardcover about 320 pages

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\$49.95



Tesla's Lost Inventions

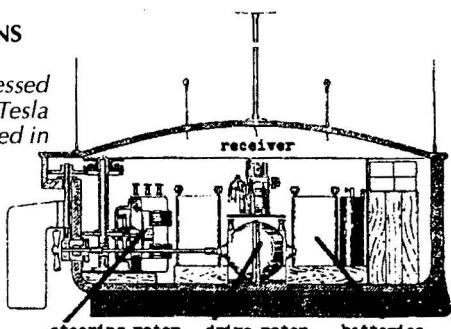
**TESLA:
THE LOST INVENTIONS**

by George Trinkaus

"Here are the suppressed inventions of Nikola Tesla all in one place rendered in clear English and in 42 illustrations. Tesla was famous at the turn of the century for inventing the alternating-current system still in use today. But his later inventions, documented in some 30 U.S. patents between 1890 and 1921, have never been utilized as Tesla intended despite their obvious potential for advancing in fundamental ways the technology of modern civilization. Among these lost inventions: the disk-turbine rotary engine, the tesla-coil electric energy magnifier, high-frequency lighting systems, the magnifying transmitter, wireless power, and the free-energy receiver." —from the front cover.

Like Trinkaus's other Tesla book, the only criticism that can be leveled here is that the chapters are too short. Interesting, unusual information, especially if you're just beginning your study of Tesla. Fairly priced. 8 1/2 x 7 booklet 34 pages

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Who Was Nikola Tesla?

TESLA: MAN OUT OF TIME

by Margaret Cheney

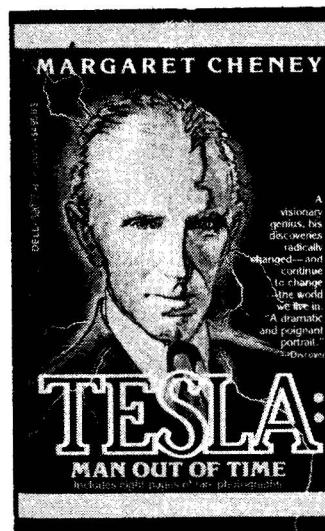
"Flamboyant, eccentric, almost supernaturally gifted, had he been born today he would still be ahead of his time. Called a madman by some, a genius by others, and an enigma by nearly everyone, Nikola Tesla was perhaps the greatest inventor the world has ever known..."

"It was Tesla who harnessed the alternating electrical current that we use today... Tesla who actually invented radio... Tesla who invented fluorescent lighting and the incredible bladeless turbine. He introduced us to the fundamentals of robotics and computer and missile science, which continued to create and transform the future..."

There are many books about Tesla, some of them are garbage written by groupies who worship Tesla as a god. Here's a great factual biography that has gotten great reviews — the story of a wizard who was Edison's enemy, Mark Twain's friend, and J.P. Morgan's client. This is the real story. Excellent book at a reasonable price. Order a copy. 310 pages "mass" paperback a few photos

Cat. no. 717

\$5.95



LAKHOVSKY MULTIPLE WAVE OSCILLATOR HANDBOOK

compiled by Thomas J Brown

Supposedly sometime before World War II, Russian experimenter Lakhovsky asked Nikola Tesla to help him design a high voltage generator that could produce electrical energy at many different frequencies simultaneously. A model of the machine was tested by physicians of the time who found that it not only had a 98% cure rate for terminal cancer, arthritis, and other "hopeless" diseases, but that it could rejuvenate plants and animals as well.

No doubt the oscillator works and is an interesting piece of equipment, but I wouldn't stake my health or anyone else's on it. Quack medicine machines were everywhere in the 1920's & 30's. This could well be another.

In this typewritten report you get historical details, wiring diagrams, construction tips, articles on waves that heal, "documented" cases of cure, reprints of the Lakhovsky patents, and a series of reprinted magazine articles on the use of radio frequency waves to cure disease.

Modern physicians have found that electrical fields can speed healing of wounds in some instances. Perhaps this material has some merit, or perhaps it's all a hoax. Maybe it's another suppressed invention. You figure it out. You'll find it interesting reading — a very unusual collection of material. Get a copy. 8 1/2 x 11 paperback 144 pages

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Tesla Turbine

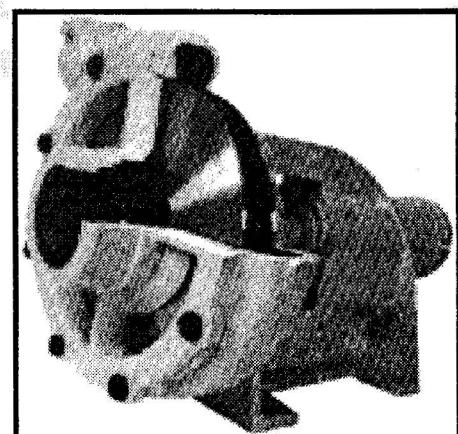
BOUNDARY LAYER BREAKTHROUGH THE BLADELESS TESLA TURBINE

compiled by C. R. "Jake" Possell

In 1909 Nikola Tesla applied for a patent on his bladeless steam turbine that could generate ten horsepower per pound of weight. Actually, the patent granted in 1913 was entitled "Fluid Propulsion" because the turbine could also be used as an efficient pump. Today, Tesla fans claim that this turbine is the solution to many of our energy problems, and that the modern world is ignoring one of the greatest inventions ever. You'll have to decide for yourself.

Here you get a collection of articles on the turbine/pump. Chapters include Tesla's Turbine, A Lighting Machine of Novel Principles, Boundary-Layer fire pump, Tesla's Hover Craft, Bladeless Jet Engines, and much more. Sources range from the New York Herald Tribune and Motor World to Scientific American and papers by Tesla himself.

You get many photos of applications, reproductions of the original patent plus re-



lated patents and much more. You'll get info on sources of plans should you want to build such a device.

This is an offbeat, quality book on an unusual topic. You hear a lot about Tesla's electrical inventions, but little about his mechanical. Get a copy of this. 5 1/2 x 8 1/2 paperback about 185 pages

Cat. no. 1307

\$19.95

Tesla Coil Plans

TESLA COIL

by George Trinkaus

Here's another Tesla coil book. It's a bit expensive for what you get, and much of it is a repeat, but there are some bits and pieces that I haven't seen.

You get a brief overview of Tesla, his career and his coil. Then you get instructions on building a good sized coil using a neon transformer and a spark gap to drive the primary. The detail is not great but is probably adequate.

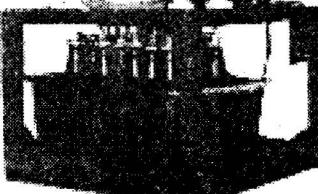


You get brief discussions and details on capacitors, glass-and-foil capacitors, oil capacitors, salt-water capacitors, series and rotary spark gaps, a schematic for a 6L6 vacuum tube driven coil, construction notes, hazards, Tesla lighting, ozone disinfector, and magnifying transmitter. All this in 21 pages!

Obviously, the booklet does not go into great detail, but there are ideas and clues here that you might not have thought of yet that might be worth the price and then some. You'll have to decide. Consider it carefully. 7 x 8 1/2 booklet 21 pages

Cat. no. 741

\$4.95



**THE VERY BEST FROM
THE ELECTRICAL EXPERIMENTER 1916-17**
anthology by Lindsay Publications Inc

You can go back to read the very best articles from one of the earliest hobbyist electronics magazines published: Gernsback's Electrical Experimenter. Readers learned how to build unusual crystal set receivers with unusual detectors, high power wireless sets, and all the equipment that went into their construction.

You'll find how-to articles on high voltage Tesla coils, induction coils, spark gap construction, batteries, detectors, water power systems, selenium cells for experimenting with primitive television systems, and more. You get the very best articles from a two year span. Many articles

that cover the basics of electricity were omitted because you can find comparable material in modern magazines. Some plans were omitted because they were not unusual enough, such as motor and dynamo plans. You can find such plans in many old books.

What you will find is solid, interesting and useful information. Be careful, though! Some of this info is downright dangerous. You can



**LIGHTNING
MADE TO ORDER**
SEE PAGE 474

The Very Best from the
**Electrical Experimenter
Magazine 1916-17**

get yourself electrocuted. You can give you and your neighbors cancer if you build and operate an X-Ray machine. Be very careful.

This is a great collection of rare material — something you should have in your reference library. Wall-to-wall illustrations! Interesting reading. Order a copy! 8 1/2 x 11 paperback 108 pages

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You should know that most of the photographs in this book are not of the best quality. Poor originals, yellowed paper, oversized pages have combined to make the photographs "muddy". The drawings are very sharp, and most type is quite readable, but the photos leave something to be desired. All we can say is that we did the best job we could. See what you think.

1884 Classic

Deschanel's STATIC ELECTRICITY

DESCHANEL'S STATIC ELECTRICITY

by A. Privat Deschanel

reprinted by Lindsay Publications Inc

In 1884 Deschanel's "Elementary Treatise on Natural Philosophy" (what we now called physics) was translated from the French and published in the U.S. as a series of four volumes. Here you get just those chapters dealing with static electricity.

You get chapters from an translated 1884 French physics text covering static electricity. Besides basic theory you'll see Nairne's machine, an unusual variety of Winter's machine, Armstrong's Hydro-electric machine, Holtz's machine, and Bertsch's machine. Just a few of other experiments shown and described are discharge in Torricellian vacuum, the electric egg, the spangled globe, the electric mortar, Leyden jars, the condenser of Aepinus, and the condensing electroscope. You'll see rare and unusual views of the complex portable electrometer, the quadrant electrometer, and many others.

A detailed textbook. Great illustrations, excellent text, and even math to back up the theory. Yes, much of this information is available in other books, but you're sure to get many new ideas. Great research reference. You'll like it. Get a copy! 5 1/2 x 8 1/2 paperback 112 pages

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Electrical Machines

SILLIMAN'S ELECTRICAL MACHINES

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You get beautifully illustrated pages from Benjamin Silliman's 1865 *Principles of Physics or Natural Philosophy*.

Learn about electrophorus, the cylinder electrical machine, Ramsden's plate machine, the American plate machine, Ritchie's double plate machine, the Tylerian machine, care & management of machines, electricity from steam, and other sources of electrical excitement. Discover seven simple but entertaining experiments. Then investigate equipment to store electricity such as the Aepinus condenser, Volta's condensing electroscope, Dr. Hare's single gold leaf electrometer, the diamond jar, scintillating tube and magic squares, chemical experiments, Volta's lamp and more.

Another collection of rare static electricity information! Wood engravings like these haven't been produced in decades. Rare info! Get a copy. 5 1/2 x 8 1/2 booklet 24 pages

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Rare Hi Voltage Books!

MAGNETISM & ELECTRICITY

ELEMENTS OF MAGNETISM AND ELECTRICITY

by John Angell

reprinted by Lindsay Publications

Queen Victoria was very much alive and kicking (and she did a lot of kicking!) when this 1891 science text hit British schools. It had apparently been in print in various editions since 1867.

It's a great book because it presents "practical instructions for the performance of experiments, and the construction of cheap apparatus." And half the book, which is so beautifully illustrated, covers static electricity equipment.

Chapters include natural magnets or lodestones, artificial magnets, terrestrial magnets, history of frictional electricity, electroscopes and electrometers, electrical induction, frictional electrical machines, distribution and tension of electricity, the Leyden jar, and experiments. The last two chapters deal with voltaic or current electricity and its use in electroplating, the telegraph, induced currents, magneto-electricity and thermo-electricity.

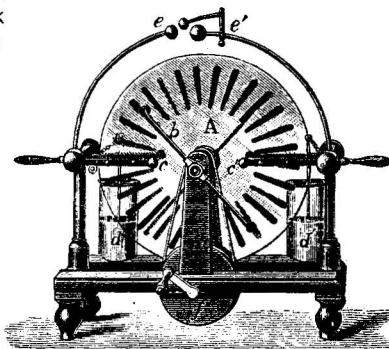
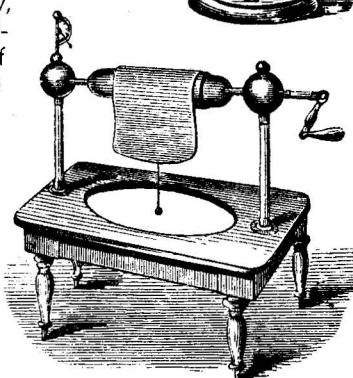
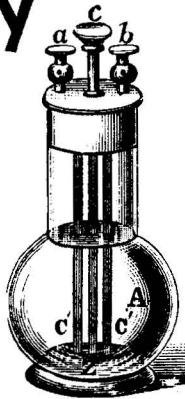
Sure, you'll find a lot of this stuff in other textbooks of the era, but the illustrations here are great and the equipment seems to be somewhat different from the varieties I usually see illustrated.

Build yourself a high-voltage machine, charge up Åpinus's condenser, and use the charge to create electrical hail inside a bell jar, or take an electrical portrait. Try Faraday's ice pail experiment. Or build equipment that will make your back bedroom look like Frankenstein's laboratory! Who knows? You might even get arrested for impersonating a mad scientist... or a politician. I can't tell the two apart...

A great little book loaded with hard-to-find information. Fun reading. Great ideas for static electricity fanatics. And that means you, son. Get a copy. A goody from merry ol' England. Oh! And this copy came from the "Methodist Sunday School Library" on Exmouth Street. So you know Queen Victoria would approve of your experiments. Order a copy, and get started! 4x7 paperback 264 pages

Cat. no. 20862

\$8.95



RARE 1890 MEDICAL ELECTRICITY TEXT!

PRACTICAL ELECTRICITY IN MEDICINE AND SURGERY

by G.W. Overall, MD

reprinted by Lindsay Publications

Overall wants you to believe that electricity can cure everything from lead poisoning to constipation. You'll get a reprint of the rare first 1890 edition published in Memphis TN. It's broken into four parts which contain chapters covering the galvanic cell, galvanic current, Faradic current, the effect of these currents, electro-diagnosis, modes of application, the electric cabinet vapor bath, the electric tub bath, treatment of special diseases of the brain, paralysis, rheumatism, chorea, and so on. Part four covers electroly-

sis, organic diseases of women, electrocautery, batteries, electrodes, and so on.

You'll find that the first few pages discuss static machines and their use, as well as galvanic battery machines, and so on. Later in the book are unusual medical electrodes that look like something out of a Frankenstein movie.

This probably just quack medicine, but it is very unusual. Rare, interesting book. Order a copy. 5 1/2 x 8 1/2 paperback 136 pages

Cat. no. 20595

\$7.95

J. H. Pepper's

STATIC ELECTRICITY!

STATIC ELECTRICITY

by J. H. Pepper

reprinted by Lindsay Publications

Back in the 1880's giant lightning generators were built by amateurs and educators and bizarre experiments performed. From Pepper's "Cyclopaedic Science Simplified" we've reprinted the chapter entitled "Electricity, Frictional or Statical", one of the best textbook discussions we've found yet.

You get a detailed discussion of electroscopes, 17 electroscope experiments, Cavallo's Cylinder Electrical Machine, the Royal Polytechnic Great Plate machine, Winter's electrical machine, the Holtz machine, the Electric Well experiment, experiments in induction, charge storage techniques, lengthy discussion of Leyden jars, the Leyden battery, followed by another thirty experiments including Cuthbertson's Balance Electrometer, the electric bomb, Harris's thundercloud needle, and a couple of machines for generating high voltage with a steam jet! And much more.

Although this is not really a cookbook for building equipment, the wood engravings are quite detailed, and the text describes the equipment thoroughly enough that you could probably build the devices without great trouble.

If you like to explore old scientific principles, build unusual apparatus, or just impress your friends, consider a copy of this unusual book. I think you'll like it. 5 1/2 x 8 1/2 paperback 88 pages

Cat. no. 4783

\$5.95

HIGH VOLTAGE EXPERIMENTS

WILLIAM PECK'S ELECTRICAL RECREATIONS

reprinted by Lindsay Publications

Try 1860 static electricity experiments designed to inform and entertain students studying physics in schools and academies. Some of this is old hat, but parts will be quite new and interesting.

Learn about the electrical chime, an electrified puppet, the electrical wheel, the electrical egg, the electrical square, the electrical cannon, the condenser of Epinus, using the condenser, slow and fast discharge of the condenser, a battery of Leyden jars, the condensing electrometer, electrocution of dogs!, heating power of electricity, and the mechanical effects of electricity.

Fascinating wood cuts illustrate almost every article. If static electricity is your field, you'll want to add this low-cost booklet to your reference library. Very unusual. Get a copy. 5 1/2 x 8 1/2 booklet 24 pages

Cat. no. 839

\$3.25

BUILD LIGHTNING BOLT GENERATORS!

SECRETS OF BUILDING ELECTROSTATIC LIGHTNING BOLT GENERATORS

by Walt Noon

You can generate high voltage with AC transformer devices like the induction coil and Tesla coil, or you can make lightning bolts with electrostatic DC devices like the Van de Graaff generator. Walt Noon, the frenetic electrical experimenter, shows us some of the things he's discovered in his quest for high voltage.

He'll show you and explain the experiments he has run, the problems he has encountered, his solutions to those problems, ways to build low cost lightning bolt generators, ideas that yet need to be explored and much more.

If you're looking for a heavy, theoretical text or a step-by-step construction manual, then this won't cut it for you. BUT! if you want general instructions that will allow you to build high voltage machines out of what you have on hand, and then improve them, you need this.

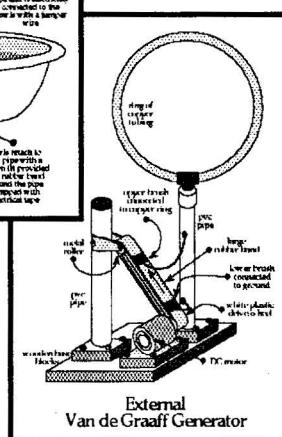
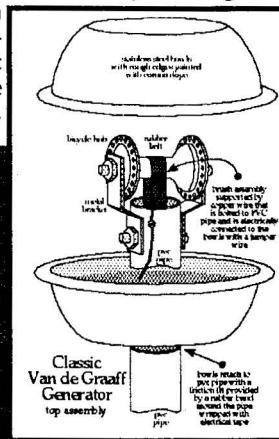
Walt covers the electrophorus, his Rotostatic generator, his bizarre "Cat-o-Static" generator,

including high voltage test equipment, experiments, motors and more!

motor speed controls, external Van de Graaff generators, the classic internal Van de Graaff generator, ideas for an extremely high voltage Van de Graaff, inductive electrostatic generators, the Dirod generator,

and more.

You'll find the equipment Walt has used to measure the voltages he has generated including his FET electro-scope, neon lamp banks, spark gap voltmeters, and more. Walt will show you how to build storage capacitors along with



details of his successes and failures.

You get a list of interesting experiments to perform from something as simple as making your hair stand on end to building a "perpetual motion" machine. You'll learn about a variety of ion motors, ion blowers, the Franklin electrostatic motor, the Poggendorff Corona Motor, and even capturing free electrical energy from the atmosphere (Ben Franklin did this, and it almost killed him!) As a bonus Walt will show you how he electroplates metal onto non-conducting forms to build low-loss high voltage terminals!

Walt is not a scientist nor a fantastic author. But he will clearly and humorously explain some of the crazy experiments he's tried and hopes you'll improve on. You get an easy-to-read text loaded with photos and drawings. You'll find that it's really quite easy to get started in electrostatics, and Walt's book will get you going!

Excellent book! Worth having. Get a copy. 5 1/2 x 8 1/2 paperback 91 pages
Cat. no. 20900

\$8.95

BUILD A 40,000 VOLT INDUCTION COIL

HOW TO BUILD A 40,000 VOLT INDUCTION COIL

by Walt Noon

Are you looking for a fast and simple way to generate high voltage? Then you should build this nifty little device. All of the parts should be available in your area, and depending how much experience you have building electronic equipment, you should be able to bolt it together in a few hours.

As you already know, the ignition coil in your automobile is the modern equivalent of an old time induction coil. It is nothing more than a transformer that converts low voltage into very high voltage. The points in your automobile replace the old fashioned

spark gap. Every time the points open, a pulse of DC current hits the coil like a hammer hits a bell. The ignition coil "rings" like a bell and produces a burst of high voltage. If you "hit" the coil fast enough, the ringing seems to be continuous.

Walt Noon's circuit here replaces the spark gap and the points with a low cost solid state circuit. The circuit takes 110 VAC out of your wall and converts it into a string of DC pulses. The pulses are sent to the terminals of an ignition coil that you can purchase

Kirlian photography.

The circuit, based on a 555 timer integrated circuit, provides pulses with adjustable power and frequency. This allows you to easily tune the pulses to the natural resonant frequency of the coil which will significantly increase the output voltage.

You get drawings of the unit, parts list, circuit diagram, photos and assembly instructions for the coil. You are expected to have at least some experience building modern electronic equipment with perf board. You get hints, tips and suggestions on where and how to make circuit modifications.

Probably best of all, Walt includes eight different experiments plus extensive details on Kirlian photography. He'll show you how to modify an inexpensive 35mm camera to take these unusual photographs in color and black and white. You

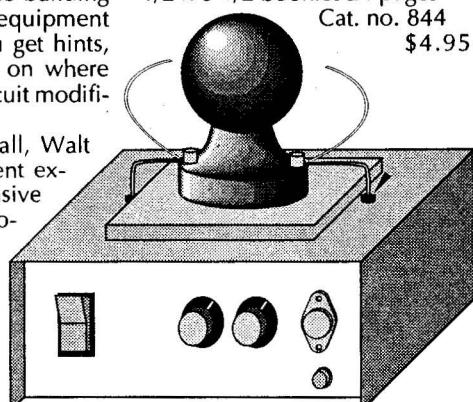


at your local discount store. Off the high voltage terminal comes a solid 40,000 volts that can be used for a variety of experiments including plasma globes and Kir-

lian photography. also get six Kirlian photographs taken with the equipment he shows you how to build.

If you want to try your hand at high voltage experiments, this might be just the way for you to "cut your teeth", and it's something you'll be proud to show your friends. And it's a good way to literally shock the pants off them! Get a copy of this. It's unusual. It's well written. And it's inexpensive. You'll like it. 5 1/2 x 8 1/2 booklet 24 pages
Cat. no. 844

\$4.95

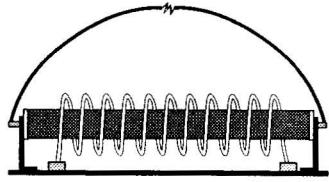


"Mini" Tesla Coil Plans

PLANS & INSTRUCTIONS TO BUILD THE
"MINI" TESLA ELECTRIC SPARK COIL
by John F. Nuyen

You get a small booklet, typewritten booklet with practical how-to from a high voltage experimenter. In other words, this is a set of plans for a working Tesla coil written by someone who has done it. It works. And you'll find a photo of the coil on the cover.

This coil uses a primary of 8 gauge wire driven by a Model-T hum coil which can be purchased from some auto supply houses (suggested sources provided.) The primary consists of 34 gauge wire wound around a 16" length of PVC tubing.



I must warn you that the how-to is not extremely detailed, but it's still quite good. Any Tesla coil experimenter would do well to have these plans. This is a home-grown coil and a home-grown publication that you won't find in any bookstore. Look it over carefully. Brief, but fairly priced. Buy a copy and start building. 5 1/2 x 8 1/2 booklet 16 pages

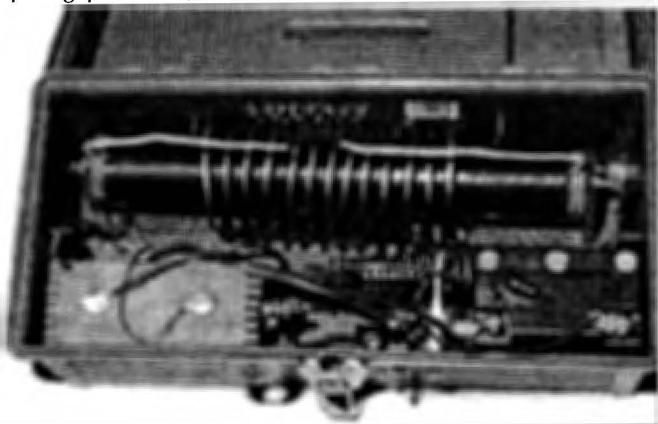
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\$4.00

PORTABLE ZAPPER

Dear Lindsay

Please find enclosed photo of Tesla coil taken from (but souped up) John F. Nuyen's booklet I got from you guys. [Mini Tesla Coil Plans No. 374] See! Some of us make things from your books. Even some of my parts are as old as an in-law. It's powered by a 6 volt motorcycle battery through a Model-T coil and puts out 1 1/4" lightning spark and brush type plasma; with adjustable spark gap, and 50,000 volts HF.



I have been asked by Air-Headed Clinton fans, "What does it do?" Nothing. "Will it make money?" No! "Why did you make it?" Because it's neat and makes people ask questions. Because it's there.

It's fully portable and discrete, built in a K-Mart 15" Tuff-Mite plastic tool box...

Stefan Johnson

W 1216 14th

Spokane WA 99204

PS Will order something when I get my plates engraved and the ink dries....

Fix Your Computer!

SERVICING PC-BASED EQUIPMENT
by Don Doerr

Here's a great book to help you service PC computers. The author wrote this in attempt to answer the most commonly asked questions from service technicians. I think he did a good job.

You get detailed flow charts to locate a problem. You can do your own repairs are a fraction of the cost of having it done. And if you DO choose to have someone else do the repair, you'll be able to ask intelligent questions. You'll be able to protect and recover your data. And much more.

If you take your PC to a dealer with a bad floppy drive, chances are they will replace it with a new one. Yet the author will tell you "floppy drive alignment is one of the easiest and most profitable areas of repair on PCs. Anyone who tells you that floppy drives are not worth repairing is either ignorant of how easily they can be repaired or is trying to ensure job security..." In other words, you can fix your own. Maybe you can make money doing it for others.

You get charts, diagrams, ex-

planations of how components work, what the terms mean, pin configurations for common CPU chips, buses, ROM BIOS, error codes, and much more.

This is not for raw beginners,



but you don't need to be an expert either. This can move you beyond the beginner stage. I just built and configured a high end 486 machine running UNIX, and I can tell you that this is one of the better books on hardware I've seen. I'll guarantee it won't answer every question (no book can), but this is worth the money.

Used PC's are cheap. Buy one and refurbish it. Maybe you can get started in repair. For me, the cost of the book is nickel-and-dime compared to the thousands I've got tied up in hardware that fills your order. Consider it carefully. 7x9 paperback 354 pages Cat. no. 3005 \$26.95

HOW TO MAKE MIRRORS

HOW TO MAKE MIRRORS
reprinted by Lindsay Publications

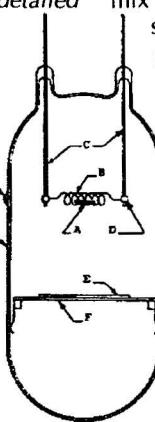
"The Brashears, rochelle salt, and formaldehyde formulas are given, together with a detailed discussion of the precautions which should be taken to avoid danger and the technique which has been found to yield the most satisfactory results at the bureau. Methods are also given for the production of reflecting films on glass by the chemical deposition of copper, platinum, or lead sulphide, by cathode sputtering, and by the condensation of va-

porized metals."

Be warned that should you mix some of the chemical too strong, there may be a dangerous explosion. But the manual goes into great detail about eliminating the dangers, and the practice of silvering. It is written for the beginner and leaves very little to the imagination. A reprint of a 1931 booklet issued by

the Bureau of Standards. Excellent! 5 1/2 x 8 1/2 book. 15 pages 2 drawings.

Cat. No. 885 \$3.00



THE DESIGN & CONSTRUCTION OF INDUCTION COILS

by A. Frederick Collins

Inside the cover of this 1908 classic is the author's statement:

"The present work treats of eight different sizes of coils, varying from one giving 1/2-inch sparks to a large one giving 12-inch sparks. These various sized coils are included in three specific designs, and I have tried to tell in easily comprehensible language each process in sequence, together with the dimensions of each part down to the smallest screw...."

Here you get one of the best books I've ever seen on coil construction.

Twenty chapters delve into the theory of the coil and the action of each of its components, design of spark coil cores, choosing interrupters, details of condenser design and size, and more. Wire is discussed along with its cutting, straightening, annealing, the making of the paper tube, bundling and taping wires for large cores, and more.

Detailed discussions reveal the advantages of silk versus cotton-covered magnet wire, mounting the spool in the lathe, winding the primary, the winding of helical secondaries, construction of aperture insulating rings, and much more. You'll learn how to dip the coil and bake it, build a vacuum apparatus to impregnate the apparatus, to dry the insulation, machine the parts for a simple spring interrupter, assemble the parts, mount the finished device, and more.

You'll learn about making tinfoil and paper condensers, adjustable mica condensers, reversing switches, and much more. You get wiring diagrams for various coils, final assembly details, sources of direct current including dry cells, plunge batteries, chloride accumulators, and more.

This is a really a great book. You get more useful data in one place on building coils than you'll usually find in a dozen other books. Tesla coils are fun and fascinating, but so is the induction coil. Build one. Experiment. Have fun. Show your friends. Brag about it. Get a copy of this! Highly recommended! 5 1/2 x 8 1/2 paperback 272 pages - well illustrated

Cat. no. 20404

\$12.95

INDUCTION COILS

HOW TO MAKE, USE AND REPAIR THEM
by G. D. Overall, MD

reprinted by Lindsay Publications Inc

Although this classic work first appeared in 1896, this fourth edition was printed in 1907. And it's just that - a classic. Although this covers much the same information as others, you get a different slant, a different

INDUCTION COILS! High Voltage AND Power!

Three Great Books Reveal Tricks and Techniques of Building Induction Coils!

point of view that you will find useful.

Chapters include Coil Construction, Contact Breakers, Insulations and Cements, Condensers, Experiments, Spectrum Analysis, Currents in Vacuo, Rotating Effects, Gas Lighting, Batteries for Coils, Storage or Secondary Cell, Tesla and Hertz Effects, the "Roentgen" Rays and Radiography, and Wireless Telegraphy.

You get information, some of it quite unique, on Ruhmkorff coils, oil immersed coils, a disruptive Tesla coil, medical coil with interchangeable secondaries, mercury vibrators, Wehnelt interrupter, adjustable cone vibrator, insulating compounds, Leyden Jar construction, glass plate condensers, adjustable condensers, experiments with luminous effects, use of the spectroscope with coils, different forms of mercury air pumps, Geissler tubes, effects of discharges in rotating tubes, application of the Ruhmkorff coil for lighting gas, and more.

You'll learn how to build batteries: Grenet, Fuller, Gravity, Dun, Gethis, Gordon, New Standard, and others. Learn how to build and use secondary, or storage batteries. Investigate the "Tesla" effects, the use of high frequency currents in electro-therapy, ways of generating X-Rays (very dangerous), the construction of a very early wireless set using a coherer detector, and much more.

If it has any fault, it's that the author has tried to cover too much material in too small a book. You'll find many illustrations. They aren't all that spectacular but you do get 79 drawings, and 8 tables. This is a book that should be in every high voltage experimenter's library. It IS a classic. The reprint will cost you less than the cost of an original if you can find one. Get a copy. Worth having. 4 1/2 x 6 paperback 288 pages

Cat. no. 20510 \$9.95



FIG. 38.—CORE AND PRIMARY COIL.

THE CONSTRUCTION OF LARGE INDUCTION COILS

A Workshop Manual

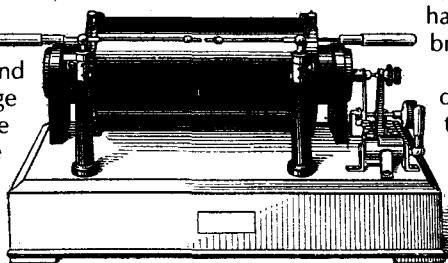
by A. T. Hare

reprinted by Lindsay Publications

Tesla coils are essentially air-core, high-frequency, resonant transformers. Induction coils are iron core transformers that run at a lower frequency with little thought being given to resonance. But do they ever work! A well-built induction coil can knock your socks off with greater power than a Tesla coil and at very high voltage.

Build a big coil! One with a core 18" long that is almost 1 3/4" in diameter and weighs almost eight pounds. The secondary is made up of over 79,000 turns of very fine wire weighing 19 pounds and being almost 17 miles in length!

Chapters include: the core, the primary coil, the main insulating tube, the condenser, the commutator, the break, the secondary coil, the winding, mounting the discs, outer insulation, covering and finishing, hand breaks, electrolytic breaks and more.



You get 35 drawings showing everything from the general layout of components to the procedure of applying insulation to the main tube. You'll learn how to build the capacitor, how to

build and adjust the break, and even how to build a unique machine to coat wire with paraffin to improve its insulating qualities.

If you build this monster and fire it up, just let me know so that I don't call the fire department by mistake! And if you try to hook it up to an X-Ray tube, I'm leaving the country! Excellent book. Rare how-to! A "must have" for all apprentice mad scientists. Build one of these machines, and scare the hell out of everyone! 5 1/2 x 8 1/2 paperback 155 pages

Cat. no. 20897 \$9.95

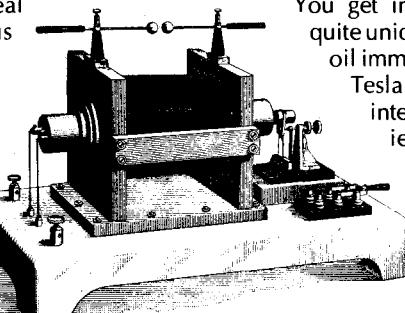


FIG. 39.—SMALL INDUCTION COIL.

FIG. 40.—INDUCTION COIL ASSEMBLY.

FIG. 41.—INDUCTION COIL ASSEMBLY.

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FIG. 158.—INDUCTION COIL ASSEMBLY.

FIG. 159.—INDUCTION COIL ASSEMBLY.

FIG. 160.—INDUCTION COIL ASSEMBLY.

FIG. 161.—INDUCTION COIL ASSEMBLY.

FIG. 162.—INDUCTION COIL ASSEMBLY.

FIG. 163.—INDUCTION COIL ASSEMBLY.

FIG. 164.—INDUCTION COIL ASSEMBLY.

FIG. 165.—INDUCTION COIL ASSEMBLY.

FIG. 166.—INDUCTION COIL ASSEMBLY.

FIG. 167.—INDUCTION COIL ASSEMBLY.

FIG. 168.—INDUCTION COIL ASSEMBLY.

FIG. 169.—INDUCTION COIL ASSEMBLY.

FIG. 170.—INDUCTION COIL ASSEMBLY.

FIG. 171.—INDUCTION COIL ASSEMBLY.

FIG. 172.—INDUCTION COIL ASSEMBLY.

FIG. 173.—INDUCTION COIL ASSEMBLY.

FIG. 174.—INDUCTION COIL ASSEMBLY.

FIG. 175.—INDUCTION COIL ASSEMBLY.

FIG. 176.—INDUCTION COIL ASSEMBLY.

FIG. 177.—INDUCTION COIL ASSEMBLY.

FIG. 178.—INDUCTION COIL ASSEMBLY.

FIG. 179.—INDUCTION COIL ASSEMBLY.

FIG. 180.—INDUCTION COIL ASSEMBLY.

FIG. 181.—INDUCTION COIL ASSEMBLY.

FIG. 182.—INDUCTION COIL ASSEMBLY.

FIG. 183.—INDUCTION COIL ASSEMBLY.

FIG. 184.—INDUCTION COIL ASSEMBLY.

FIG. 185.—INDUCTION COIL ASSEMBLY.

FIG. 186.—INDUCTION COIL ASSEMBLY.

FIG. 187.—INDUCTION COIL ASSEMBLY.

FIG. 188.—INDUCTION COIL ASSEMBLY.

FIG. 189.—INDUCTION COIL ASSEMBLY.

FIG. 190.—INDUCTION COIL ASSEMBLY.

FIG. 191.—INDUCTION COIL ASSEMBLY.

FIG. 192.—INDUCTION COIL ASSEMBLY.

FIG. 193.—INDUCTION COIL ASSEMBLY.

FIG. 194.—INDUCTION COIL ASSEMBLY.

FIG. 195.—INDUCTION COIL ASSEMBLY.

FIG. 196.—INDUCTION COIL ASSEMBLY.

FIG. 197.—INDUCTION COIL ASSEMBLY.

FIG. 198.—INDUCTION COIL ASSEMBLY.

FIG. 199.—INDUCTION COIL ASSEMBLY.

FIG. 200.—INDUCTION COIL ASSEMBLY.

FIG. 201.—INDUCTION COIL ASSEMBLY.

FIG. 202.—INDUCTION COIL ASSEMBLY.

FIG. 203.—INDUCTION COIL ASSEMBLY.

FIG. 204.—INDUCTION COIL ASSEMBLY.

FIG. 205.—INDUCTION COIL ASSEMBLY.

FIG. 206.—INDUCTION COIL ASSEMBLY.

FIG. 207.—INDUCTION COIL ASSEMBLY.

FIG. 208.—INDUCTION COIL ASSEMBLY.

FIG. 209.—INDUCTION COIL ASSEMBLY.

FIG. 210.—INDUCTION COIL ASSEMBLY.

FIG. 211.—INDUCTION COIL ASSEMBLY.

FIG. 212.—INDUCTION COIL ASSEMBLY.

FIG. 213.—INDUCTION COIL ASSEMBLY.

FIG. 214.—INDUCTION COIL ASSEMBLY.

FIG. 215.—INDUCTION COIL ASSEMBLY.

FIG. 216.—INDUCTION COIL ASSEMBLY.

FIG. 217.—INDUCTION COIL ASSEMBLY.

FIG. 218.—INDUCTION COIL ASSEMBLY.

FIG. 219.—INDUCTION COIL ASSEMBLY.

FIG. 220.—INDUCTION COIL ASSEMBLY.

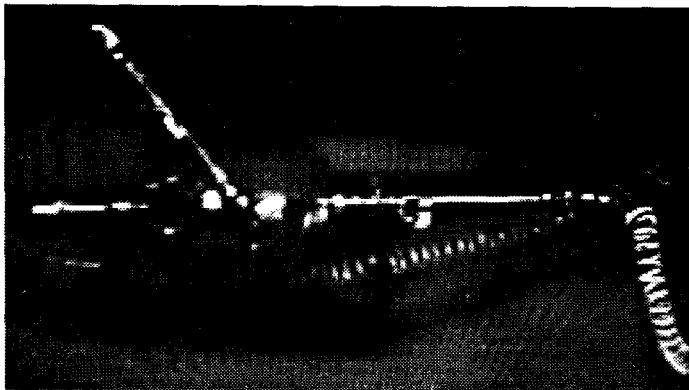
FIG. 221.—INDUCTION COIL ASSEMBLY.

FIG. 222.—INDUCTION COIL ASSEMBLY.

FIG. 223.—INDUCTION COIL ASSEMBLY.

FIG. 224.—INDUCTION COIL ASSEMBLY.

FIG. 2



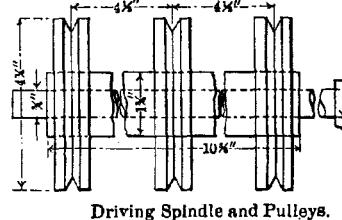
Great Wimshurst Plans!

High-Voltage!

**THE WIMSHURST MACHINE
HOW TO MAKE AND USE IT**
by Alfred W Marshall

reprinted by Lindsay Publications

"A practical handbook on the construction and working of the Wimshurst machine, including radiography and wireless telegraphy, etc., and other static electrical apparatus."



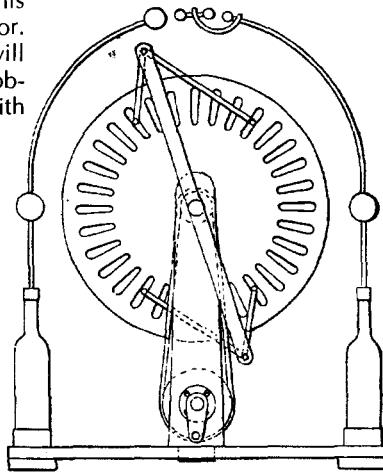
This is a small book loaded with illustrations and wall-to-wall how-to. There are photographs but they are of poor quality. After all, in 1908 not every printer was capable of printing photographs.

This is quite a rare book. You would be hard pressed to find an original copy at any price. But you can have a copy for your library at a reasonable price and use it to build a machine or just to read. Get a copy. Great little book. You'll like it! 4x7 paperback 112 pages

Cat. no. 20331 \$8.95

Build yourself a copy of this classic lightning bolt generator. This is no toy! Its 24" plates will knock your socks off—and probably electrocute you if used with Leyden jar accumulators. This is a heavy duty machine.

Chapters include introduction, static electricity, the electrophorus, the electroscope, condensers, the Leyden jar, parts of a Wimshurst machine, making and management of Wimshurst machine, examples of machines, a large Wimshurst machine, a machine for X-Ray work (dangerous), and experiments with machines.



X-Ray & Geissler Tubes Video!

VIDEO - IN QUEST OF THE LIGHT; VISIBLE AND INVISIBLE
by Kruezer and Hardesty

Tour an amazing collection of early electrical hardware and watch it operate on this fascinating 90 minute videotape.

You'll see electroscopes, pictures of early electrostatic machines and vacuum pumps, early batteries and galvanometers. You can watch as each of several early induction coils come to life throwing big sparks. See an early device used by physicians to measure the voltage of their high-voltage electrical machine before turning it on their patients.

Then watch colorful Geissler tubes (related to neon tubes of today) come to life when they're connected to an induction coil. Watch the amazing paddle wheel or railway tube operate when hit with an electron beam.

Next, you'll see Crookes tubes and how they lead to the discovery of X-Rays by Roentgen. You'll see a variety of early X-Ray tubes and learn how they had to be controlled and operated. You'll also see the rare pamphlets Roentgen published announcing his discovery to the scientific world a hundred years ago.

You get a fascinating historical exhibition of early electrical equipment with informative narration. To see early Geissler and X-Ray tubes operate is full color is exciting. You may want to experiment with Geissler tubes. X-Ray is probably too dangerous. I don't know where else you'll find an experience like this. If you're into high-voltage projects, I think you'll find this very entertaining. Get a copy! 90 minute VHS videotape

Cat. no. 396 \$29.95

LIGHTNING BOLTS FROM A HOMEBUILT WIMSHURST MACHINE

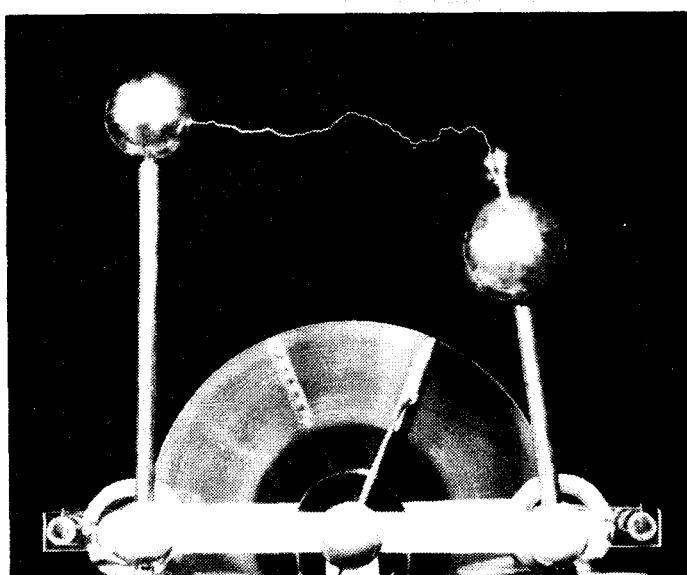
**HOMEMADE LIGHTNING –
CREATIVE EXPERIMENTS IN
ELECTRICITY**

by R. A. Ford

From the back cover:

"The author explains how to build an affordable high-voltage generator and then describes how to use the generator safely to conduct your own electrostatics research. Ford has compiled a fascinating collection of experiments to get you started that reveal the wide-ranging impact of electrostatics on motor design, plant growth, medicine, aerodynamics, gravity, photography, meteorology, and much more."

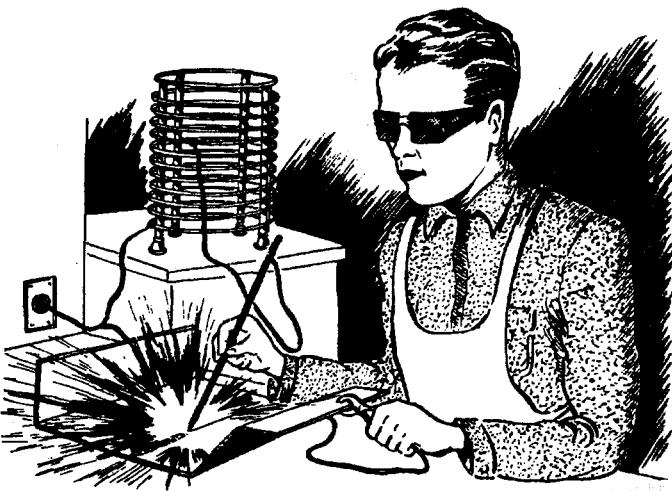
You get brief but adequate instructions, drawings, photographs, hints and tips on how to build a Wimshurst machine capable of delivering 101 1/2" sparks.



You also get plans for an electroscope, the Leyden jar condenser, and the electrophorus. Ford describes experiments you can perform such as electrostatic motors, electrohorticulture, cold light, the levitating rocket, and more. You'll also get reprints of old articles on early electrostatic machines, instruments, and more.

It has much the same information you'll find in other books in this catalog, but this equipment is built with currently available materials. You'll find this book is about electrostatics, that is, static electricity. There is nothing on AC devices such as the Tesla coil. Good book. Order a copy! 7 1/2 x 9 1/2 paperback 198 pages

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Simple Electrical Experiments

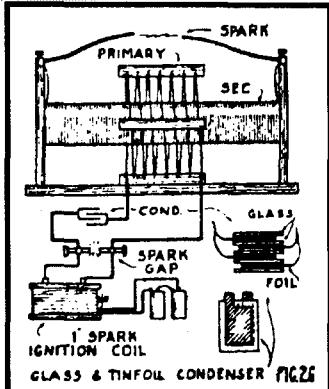
Gernsback's Educational Library

NO. 9 SIMPLE ELECTRICAL EXPERIMENTS

reprinted by Lindsay Publications

In the late 1930's Hugo Gernsback's Radio Publications company in New York published a series of ten shortwave radio and electricity booklets to satisfy the public's growing interest. Each booklet provides lots of ideas and fascinating reading.

You can build a galvanometer, experimental magnet, simple motor, electric shocker, microphone, arc lamp, primitive Tesla coil, electric furnace, arc welder, a home-made key, batteryless flashlight and more. Perform tricks with telephone receivers and experiments with lamps, neon lamps, condensers, talking condensers, static electricity, and more. You'll find a brief section on making a magnet, on rheostats and how to use them, rectifiers, simple measuring instruments, heater or cold from junction of dissimilar metals, handy wire gauge, musical instr-



struments, and more.

The original booklets were printed during the Great Depression on inferior quality paper and are now quite rare. The badly disintegrated originals were not well printed to begin with, so you'll find some fading and broken up type and illustrations. Nevertheless, you'll find the information quite useable. Order a copy today! 5 x 6 1/2 booklet 32 pages

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MECHANICS NOTEBOOK 18

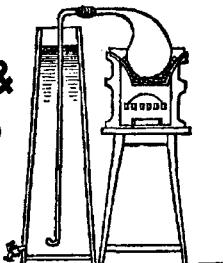
GLUE, GREASE & MATCHES

reprinted by
Lindsay Publications

From "The Techno-Chemical Receipt Book" (1886) by Brann & Wahl come formulas and instructions for making adhesive grease, grease for waterproofing leather, lubricants for machines, and more. Learn how to make glue and extract gelatin from hides, bones, and cartilage. Make isinglass (fish glue), printer's rollers from glue and glycerin, and more. Make Swedish matches, parlour matches, matches inextinguishable by the wind, and more. 5 1/2 x 8 1/2 booklet 15 pages

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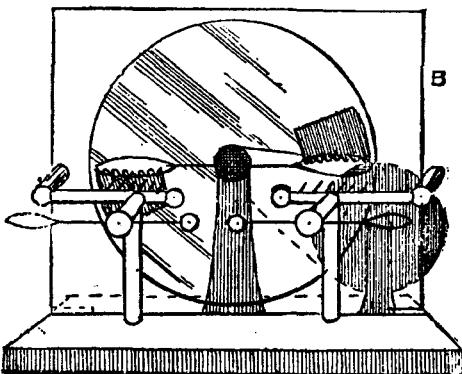
GLUE, GREASE & MATCHES



ELECTRICAL INSTRUMENT-MAKING FOR AMATEURS
by S. R. Bottone
reprinted by Lindsay Publications Inc

You can go back a hundred years and build your own equipment and be right at the "cutting edge" of 1888 technology.

You get basic information on materi-



BUILD ELECTRICAL MACHINES!

als, soldering, and working glass. Then you build pith ball and gold leaf electroscopes, a Coulomb torsion balance, and Volta's electrophorus static generator. You'll learn how to take a sheet of glass and cut a circle from it, drill a hole in the center and use it to build Bertsch's high-voltage static generator, Carre's Dielectric machine, a Holtz machine, and a Wimshurst influence machine. Any one of these machines is powerful enough to shock the underwear off Aunt Annabelle!

You'll learn how to build a medical coil that produces a 1/2" spark, or a 1" spark induction coil. With a powerful magnet you can make a shocking machine which appears to be little more than a simple magneto. Build a uni-direction current machine (a motor), a dynamo, an ammeter, a voltmeter, a galvanometer, batteries, a single fluid cell, a double fluid cell, and using these two basic battery configurations how to create powerful batteries using chemicals from zinc chloride and sulphuric acid to sal ammoniac and potassium dichromate which are more commonly known as the Daniell, Bunsen, Smee, Walker cells and others. Then you get simple plans so that you can build a working electrical telephone, the newest rage a hundred years ago.

Obviously so many topics are covered in such a small book that the number pages devoted to each topic are necessarily limited. Nevertheless, you get enough useful information to build working equipment. The illustrations are primitive by today's standards but are informative.

Fascinating book! Valuable information! Get a copy. Worth having. 5x7 paperback 183 pages

Cat. no. 4929 \$9.95

EXPLORE MYSTERIES OF LIGHTNING!

ALL ABOUT LIGHTNING

by Martin A Uman

You'll enjoy this great easy-to-read, highly entertaining book on lightning and its dirty work. From the back cover:

"Does lightning strike twice in the same place? How does a lightning rod work? What is ball lightning? How many thunderstorms are in progress in the world at any one time? Why does lightning zigzag? What is St. Elmo's Fire?

These and many more often-asked questions about lightning are answered in this fascinating and informative guide for the layman, presented in an easy-to-follow question-and-answer format. One of nature's most awesome phenomena, lightning has

intrigued man since earliest times. In this book, a noted scientist and expert on lightning dispels many misconceptions while offering a wealth of scientific and technical information about the nature of lightning and its effects.

You'll discover how Benjamin Franklin proved that lightning was electrical, how to protect yourself from lightning, how to photograph lightning (it's not difficult), the possible relationship between ball lightning and UFOs, what to do for a person struck by lightning, the nature of sheet lightning, ribbon lightning, bead lightning and other variations, and much more. While the overall approach is nontechnical, Dr. Uman has incorporated scientific data in the answers in such a

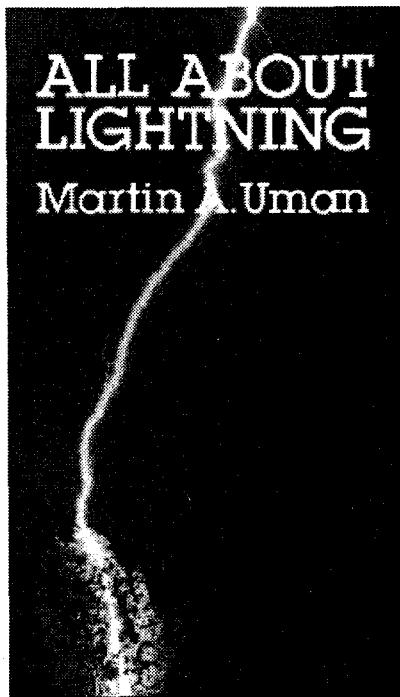
way that laymen will find the book a near-painless introduction to current scientific knowledge about lightning.

Simple, well-drawn diagrams illuminate the text, along with a selection of spectacular lightning photographs, including a remarkable image of 5 lightning bolts produced by the explosion of the first thermonuclear device. In addition, each chapter contains a list of references cited in the text which suggest further reading for anyone interested in finding out more about earth's dazzling atmospheric fireworks."

Fascinating book. Get a copy! 5 1/2 x 8 1/2 paperback 192 pages Cat. no. 5001 \$5.95

ALL ABOUT LIGHTNING

Martin A. Uman



55 Wild Projects!

Including...

- Jacob's Ladder
- Plasma Sphere
- Induction Coil
- Van de Graaff generator
- Tesla Coil
- Kirlian Camera
- Superconductor Disc
- See-in-the-Dark Viewer
- Robots
- much more!

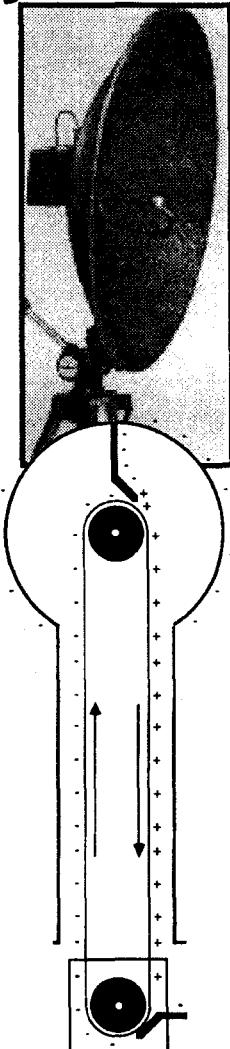
GADGETEER'S GOLDMINE!

by Gordon McComb

Here, in a single book, are 55 off-the-wall devices you can build.

You get a Jacob's ladder, plasma sphere generator, induction coil, Van de Graaff generator, Tesla coil, Kirlian camera, piezo film speaker and amp, He-Ne laser pistol, variable-rate strobe light, radiation detector, universal receiver, superconductor disc, see-in-the-dark viewer, shape-memory alloy, espionage devices, robots, and more!

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Advanced Lightning Text Great Reference!

LIGHTNING

by Martin A Uman

Whether you are interested in nature's fantastic electrical displays, or trying to find a way to generate bigger lightning bolts of your own, you'll find this technical investigation delivers more hard-to-find information than a dozen other books put together.

From the back cover:

"This book is simply indispensable to the serious student of lightning.

Written at the level of an advanced undergraduate in physics or engineering, the book's remarkable clarity and minimum of mathematical notation make it accessible to the nonspecialist and of great use as a teaching resource or for self study. Dr. Uman, whose own work has contributed greatly to understanding the physics of lightning, has divided the book into seven chapters. Chapters 1-4 present a general introduction to lightning phenomena and terminology, lightning photography, electrical and magnetic field measurements and current measurements. Chapters 5-6 discuss lightning spectroscopy and thunder (often neglected by other authors) and present a wealth of new and detailed analyses of the latest data. Chapter 7 clearly reviews existing theories regarding the discharge process from the special vantage point of a scientist well-versed in plasma physics.

Professor Uman's descriptions of the work of other scientists are exceptionally accurate and each chapter includes extensive references to work in the field, resulting in a comprehensive and detailed bibliography of pertinent publications. Four appendices bring recent research up-to-date and cover such phenomena as bead and ball lightning. A fifth appendix, added especially for this edition, reviews experimental data and modeling. The book is further enhanced by comprehensive and easy-to-use indices to subjects and authors."

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**BUILD YOUR OWN WORKING
FIBER OPTIC, INFRARED
AND LASER SPACE-AGE PROJECTS**

by Robert E. Iannini

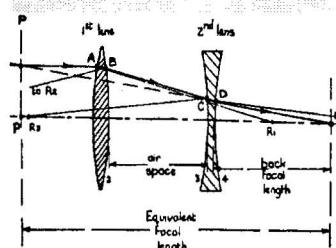
From the back cover:

"Here, you'll find plans for such fascinating devices as a high sensitivity laser light detector... a high voltage laboratory generator that's useful in all sorts of laser, plasma ion, and particle applications as well as for lightning displays and special effects... a solid-state gallium arsenide injection laser system capable of producing 4- to 30-watt peak power infrared pulses at 200 to 2500 pulses per second... an infrared viewer that has functions ranging from nighttime surveillance to viewing IR laser beams..."

"Robert Iannini is an electrical engineer and inventor. He holds numerous patents on such products as electronic and ultrasonic insect and pest control devices, stay-awaked devices for drivers, and other high technology devices..."

You get fourteen different projects, twelve of them being laser devices. But even chapter fourteen oughta fire ya up! He'll show you

OPTICS!



**OPTICS AND
OPTICAL INSTRUMENTS**
by B.K. Johnson

Here's a reprint of a 1947 book that reveals in simple formulas how to design or at least understand microscopes, telescopes, collimators, simple and complex lenses, photographic lenses, mirrors and more.

Chapters include: reflection and refraction, focal length measurements, the eye, the telescope, the microscope, photographic lenses, optical projection systems, working and testing optical glass, plus an appendix describing how to silver mirrors, cement lenses, and more.

You won't need this material everyday. But if you need basic info on lenses without all the complex theory, get a copy of this. Quite reasonably priced. 5 1/2 x 8 1/2 paperback 224 pages Cat. no. 551 \$5.95

SPACE AGE PROJECTS

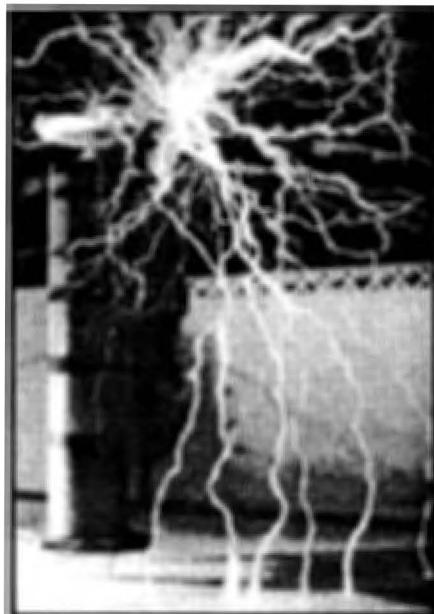
**Zap 'em
with lasers**

how to build a DC power supply capable of delivering microamps of current at voltages adjustable from 35,000 to 250,000 volts! This is not a Tesla coil. This is similar to the high voltage supply in a TV set with a voltage multiplier attached. The voltages produced are so high that generation of X-Rays becomes a very real danger when using this machine. You have to be careful.

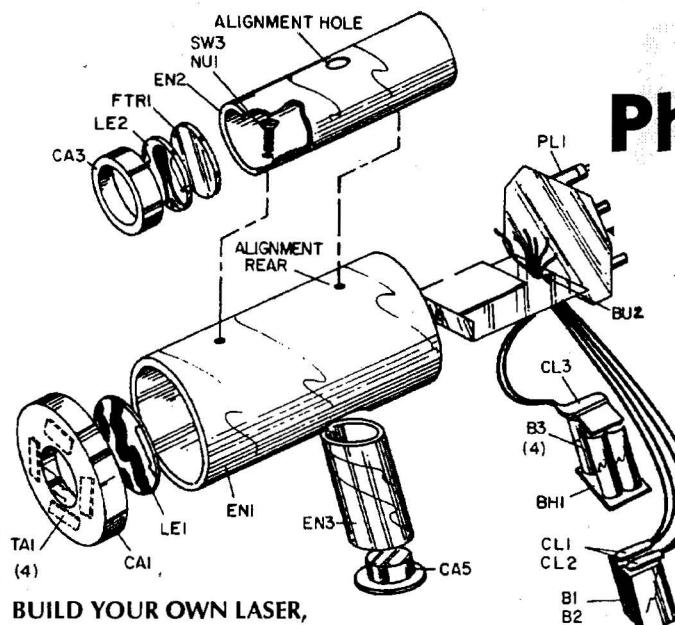
You get schematics, diagrams, step-by-step how-to, safety precautions and more. Unusual how-to, to say the least!

Imagine! The next time you catch raccoon digging through your garbage cans, you can nail them with a laser! Fry the roaches under the kitchen sink! Clobber that snake that comes slithering out of the toilet bowl and scares the hell out of your mother-in-law. (On the other hand, let the snake be. He's too much fun...)

Get a copy of this, build yourself a laser and a lightning bolt generator. Strange, hi-tech stuff. Go for it! 7 1/2 x 9 paperback 262 pages Cat. no. 393 \$17.95



Lasers! Phasers! Ion Ray Guns!



**BUILD YOUR OWN LASER,
PHASER, ION RAY GUN...**

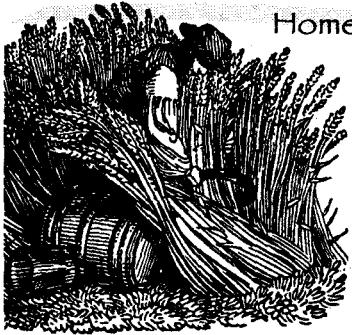
by Robert E. Lannini

Here's one of the most bizarre collections of how-to plans I have ever seen. You'll learn how to build high-power pulsed red ruby laser gun, high-power continuous IR CO₂ Laser, ultrasonic field generator, programmable high-power ultrasonic generator, 250,000 volt Tesla coil, magnetic field distortion detector, solid-state Tesla coil, a variety of wireless "bugs", a super-sensitive parabolic microphone, electronic paralyzing device, battery charger and eliminator and much more.

Iannini is an experienced electronics inventor, and holds many patents. He'll give you parts lists, wiring diagrams, assembly diagrams and all you need to get these projects built. I don't think that it's any coincidence that almost every plan has a footnote telling you that kits are available from Information Unlimited, Inc., which is owned by the author and which advertises in the back of the science and mechanics magazines. No doubt, that firm's best selling plans have been reprinted in this single volume.

- beginner's simulated laser
- visible red laser
- pulsed laser rifle
- ruby laser gun
- CO₂ laser
- laser light detector
- plain field generator
- phaser shock-wave pistol
- ultrasonic generator
- ultrasonic listening device
- 250 kv Tesla Coil
- Ion ray gun
- magnetic field distortion detector
- light-beam communicator
- solid-state Tesla coil
- infrared viewer
- FM voice transmitter
- long-range telephone xmtr
- parabolic microphone
- paralyzing device
- wireless repeater xmtr
- much, much more!

This book is expensive, but it delivers. I really like this, and I'm sure you will too. Order a copy, even if it has to sit for two years on the shelf before you get ready to build. Excellent book. 8 x 9 1/2 paperback 390 pages. Cat. No. 346 \$17.95



**THE COMPLETE HANDBOOK
OF HOME BREWING**
by *Dave Miller*

I continually look for good books that will show me how to brew really good beer, like the old world stuff, rather than the cidery homebrew that most people turn out. I'm a beer snob, and only the best will do for me. Happily, the author is a beer snob, too. And the techniques

and advice he gives in this brand new book are the best I've ever seen.

For instance, one typical recipe for an American all-grain Pilsener contains such specifications as 10 qt mash water at 136°F, mash pH

BREW GREAT BEER!

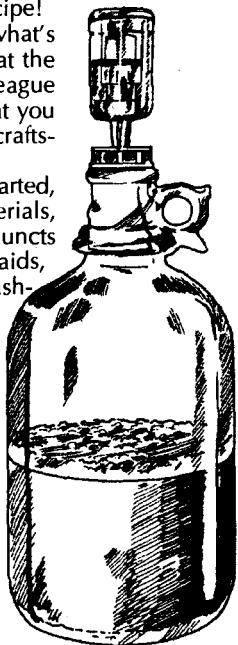
5.3 adjusted with gypsum, a 30 minute protein rest at 131°F, with a 2 hour starch conversion at 150° - 141°F, and wort pH of 5.3-5.5 at pitching time. And that's only part of the recipe!

Complicated? Not after you understand what's going on. You can be absolutely certain that the brew you turn out will NOT be in the same league as the malt syrup and table sugar rot gut that you have been making. In other words, this is craftsmanship.

Chapters include the brewer's art, getting started, equipment, cleaning, introduction to materials, pale malts, special malts, malt extracts, adjuncts and sugars, water, hops, yeast, brewing aids, improving your extract beers, small-scale mashing, brewing all-grain beers, crushing the malt, the mash-in, acid rest and protein rest, starch conversion, sparging, boiling the wort, cooling and assessing, fermentations, bottling, and on and on.

There is more hard-to-find detailed information here than you'll find in a dozen run-of-the-mill brewing books. Top rate. The best I've seen. If you're into brewing, or think you might want to try one day, this is definitely worth having. Excellent. Order a copy. 6x9 paperback 248 pages

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THROW BOOMERANGS!

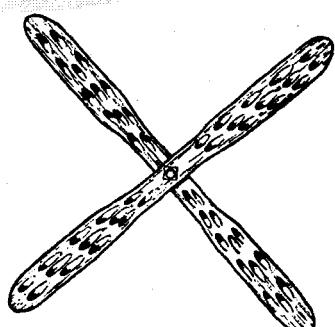
**HOW TO MAKE THEM AND
THROW THEM**

by *Bernard S. Simon*

"It only takes minutes to make a good guaranteed-to-return boomerang. By following a few more simple steps you will learn to throw it so it will always return to you..."

Learn how to make all of the standard designs: pin-wheel, boomabirds, airplane shapes, other ornamentals, tumblesticks, and others.

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PRESERVE YOUR MEAT!

**THE CANNING, FREEZING, CURING &
SMOKING OF MEAT, FISH & GAME**

by *Wilbur F. Eastman Jr*

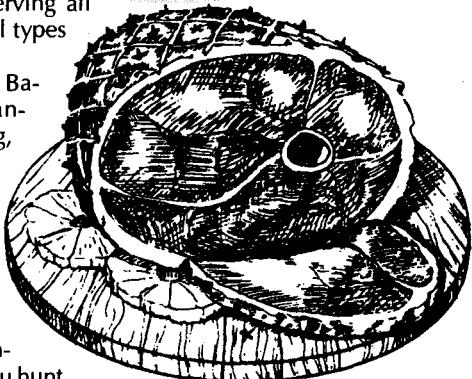
Here's a great reference book that will allow you to preserve meat for the future. You get a mixture of plans, tips, how-to instructions, and recipes for preserving all types of meat with all types of processes.

Chapters include Basic Information, Canning, Freezing, Curing, How to Build a Smokehouse, Beef and Veal, Pork, Lamb, Poultry, Game, Fish, and Recipes.

You'll learn to process meat inexpensively and safely. If you hunt, fish, or raise livestock, you can use the techniques of early settlers and explorers who had no refrigerators.

No, I didn't see anything on pickling those pesky alligators that live in New York sewers. Or was it the Chicago sewers? But I did see tips on just about everything else. A classic book first released in 1975 and updated in 1989. Excellent book. Get a copy. 5 1/2 x 8 1/2 paperback 202 pages

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**Smoke hams, fish...
Make sausage...
Brine cure... More!**



**SMALL TIME
OPERATOR**

**"How to Start Your
Own Small Busi-
ness, Keep Your
Books, Pay Your
Taxes & Stay Out of
Trouble!"**

by *B. Kamoroff, CPA*

Probably the biggest nightmare that anyone launching a business experiences is the paper work. Yet Kamoroff, a certified public accountant, will show you how to slip into a profitable business with the least red tape and fewest hassles.

Learn about: markets, locations, financing, name registration, licenses, permits, sales tax, federal ID numbers, insurance, and choosing a business name. Chapter two will introduce you to bookkeeping, making it about as painless as possible. The third chapter will teach you about ex-

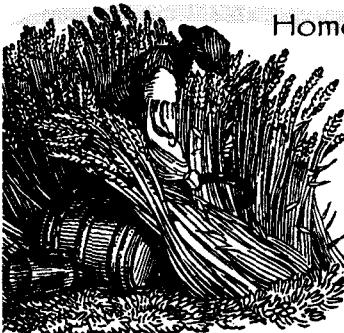


panding your business: hiring help, keeping a payroll, partnerships, and corporations. You'll learn practical procedures for figuring taxes, deductions, balancing bank accounts for farmers, how to handle bad debt, and more. And you'll find plenty of examples.

An excellent book that teaches the difficult aspects of business. Must reading.

8 1/2 x 11 190 pages - easy to understand

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BUILD A HOUSE!

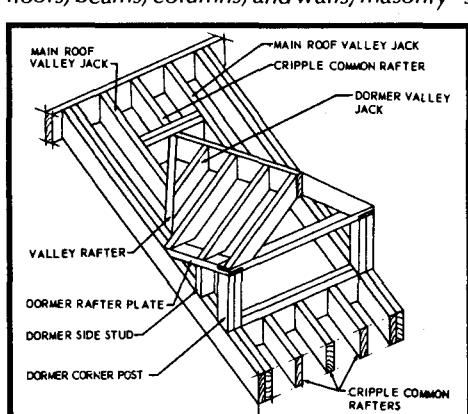
BASIC CONSTRUCTION

TECHNIQUES for Houses and Small Buildings Simple Explained
by Bureau of Naval Personnel

Learn carpentry! Maybe you could build a regulation Marine barracks in your backyard!

"Many homeowners have at one time or other considered building their own home or adding an extension to their present house. One of the best backgrounds for such home construction is offered by the manual which the U.S. Navy has prepared for use in its own classes."

Detailed chapters cover such basics of construction as: concrete - selecting the mixture, using forms and joints, reinforcing, placing, finishing, and curing concrete, and using concrete for foundations, floors, beams, columns, and walls; masonry - selecting bricks, mortar and patterns, laying concrete blocks, structural clay tile, stone, and brick, insuring watertightness and proper bonding, and using brick for door and window sills and lintels; woodworking - using and selecting tools and materials; rough carpentry-building framings for foundations, floors, walls, and roof; exterior finishing-finishing cornices and roof, installing asbestos-cement siding, insulation and outside wall covering; interior finishing - completing ceiling, walls, stairs, window sashes, casings, and doors, adding baseboards and trim, and plastering, stuccoing, and setting tile; and painting - selecting the paint, preparing surfaces and using techniques for the most efficient and most permanent job.



terior finishing-finishing cornices and roof, installing asbestos-cement siding, insulation and outside wall covering; interior finishing - completing ceiling, walls, stairs, window sashes, casings, and doors, adding baseboards and trim, and plastering, stuccoing, and setting tile; and painting - selecting the paint, preparing surfaces and using techniques for the most efficient and most permanent job.

Other chapters cover related subjects and techniques...."

Lots of useful instruction at a reasonable price. Yes, you even get plans for regulation latrines. Your mother-in-law will love that! Get a copy. 6 1/2 x 9 1/4 paperback 568 pages over 675 illustrations
Cat. no. 589

\$12.95

GUIDE TO BETTER WINE AND BEER MAKING FOR BEGINNERS

by S. M. Tritton

There are many books on making beer and wine, and this may not be the very best or the most modern. But what you get is value. You get the basic processes and the recipes at a very reasonable price.

"Almost anything that grows (and honey too) can be made by the most inexperienced beginner into a delicious wine: almonds, apricots, bananas, beetroots, bilberries, carnations, chamomile, cherries, cloves, corn, currants, dates, figs, ginger, golden rod, green-gage plums, hawthorn, lichi fruit, marrow, oak leaves, oranges, pansies, rosehips, tangerines, tomatoes, as well as grapes, are a

few of the 125 fruits and vegetables for which wine, beer and liqueur recipes appear in this A-Z guide.

Explicit diagrams make the techniques simple to acquire. You will also find all the information needed to 'nurse' the wine to the peak of perfection: racking, stabilization, clarification, fining, blending, bottling and storing are covered in sufficient detail to assure a product in which you can pride yourself."

A great book to get started with. A reprint of the 1965 original. Consider it. 5 1/2 x 8 1/2 paperback 157 pages
Cat. no. 609

\$4.95

GROW FOOD IN CHEMICALS! HORRORS!

HOME HYDROPONICS AND HOW TO DO IT!

by Lem Jones

People are SO ignorant! If you tell them that it's possible to grow plants in chemicals, they immediately think of PCB's, heavy metals, even the ozone layer. They're horrified! They never stop to think that every plant and animal is composed of chemicals. They're too poorly educated to know that a plant's roots are there to hold the plant upright AND to suck chemicals out of the soil.

I'm sure you know a bonehead like this. Get a copy of this and give it to them. They need educating.

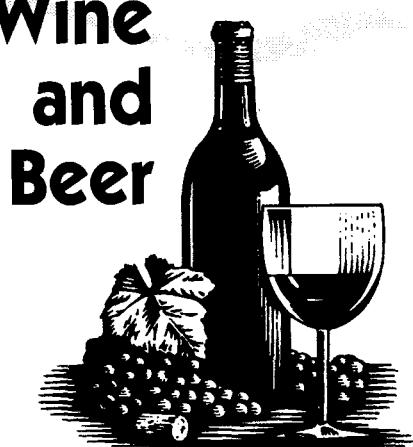
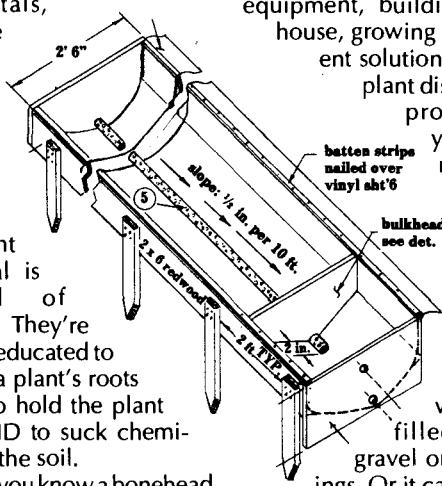
For the rest of us, we can amaze the boneheads by growing tasty giant tomatoes in sand, vermiculite or pebbles in the dead of winter! They won't know how it's done. In fact, look at all the people that travel through the pavilion at Epcot Center in Florida that features hydroponics. They come out believing it's high-tech. Nuts! It's been around for at least a century!

This is an updated and revised edition of a classic book that has been in print since '77. Chapters cover history, simple systems, equipment, building a greenhouse, growing media, nutrient solutions, plant care, plant diseases, insect problems, and you get a list of reference materials and suppliers.

Hydroponics can be as simple as a 10" oval pan on a simple wooden frame filled with pea gravel or wood shavings. Or it can be an intricate greenhouse with pumps and timers and lights. It's whatever you want it to be.

Get a copy of it. If you can develop a giant form of Venus Flytrap that eats mothers-in-law, let me know. I'm in need! Otherwise grow some potatoes or sweet corn. Sunflowers might be difficult. Great first book. Get started! 5 1/2 x 8 1/2 paperback 142 pages

Cat. no. 610 \$12.00



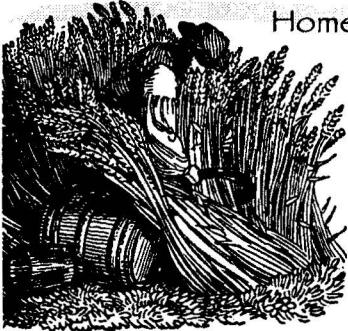
Basics of Brewing Wine and Beer

few of the 125 fruits and vegetables for which wine, beer and liqueur recipes appear in this A-Z guide.

Explicit diagrams make the techniques simple to acquire. You will also find all the information needed to 'nurse' the wine to the peak of perfection: racking, stabilization, clarification, fining, blending, bottling and storing are covered in sufficient detail to assure a product in which you can pride yourself."

A great book to get started with. A reprint of the 1965 original. Consider it. 5 1/2 x 8 1/2 paperback 157 pages
Cat. no. 609

\$4.95



THE WORLD'S FINEST BREWS

lagering. You'll learn all the details of yeast, malt and measurements in degrees Lovibond, sugars, hops and their AAU's, all the equipment and techniques. If you really get into this, you'll learn the intricate technique of maintaining pure yeast cultures just as the

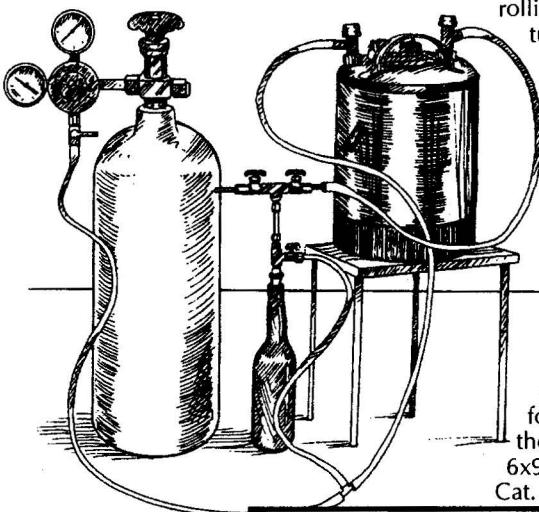
labs in the biggest breweries do and lots more.

You can make great ale, stout, porter, German ales, weizenbier, Munich dunkel, helles bock, and much more. You'll probably want to make some of your own brewery equipment. Your wife just might use the rolling pin on you when she finds you've turned the basement into a giant chemistry set, and when she finds that you and your friends are rarely sober anymore. But doesn't sound like fun?

Now you won't have to buy an \$800 plane ticket to suck Adnan's ale in a London pub, or draft Hacker-Pschorr Weissbier in the Marienplatz in Munich. Instead, you can spend it on hangover medication!

You get sources for brewing publications, associations, equipment, supplies and all the rest. This is one of, if not the best, brewing book I've seen yet. Well illustrated. An absolute must for the beer snob who dreams of brewing the best. Consider it while I open a brew. 6x9 paperback 150 pages
Cat. no. 6047

\$12.95



BREWING THE WORLD'S GREAT BEERS A Step-by-Step Guide

by Dave Miller

If you drink light beer out of a can because you think beer has to taste like aluminum, this book is certainly not for you. This is a follow up to Miller's first book on brewing. It will get you started brewing great beer. This book will show you how to come extremely close to duplicating the world's finest beers. You'll learn how it's done step-by-step right here.

Chapters include getting started, steps to better brewing with malt extract, first steps in grain brewing, the last step: all grain brewing, going semi-pro, glossary, bibliography, and sources.

This is full tilt. No simplification. You can brew a quality pale ale, a pilsner, or you can jury-rig an old refrigerator and get into

AMERICAN SKILLS

BACK TO BASICS How to Learn and Enjoy Traditional American Skills

by Reader's Digest

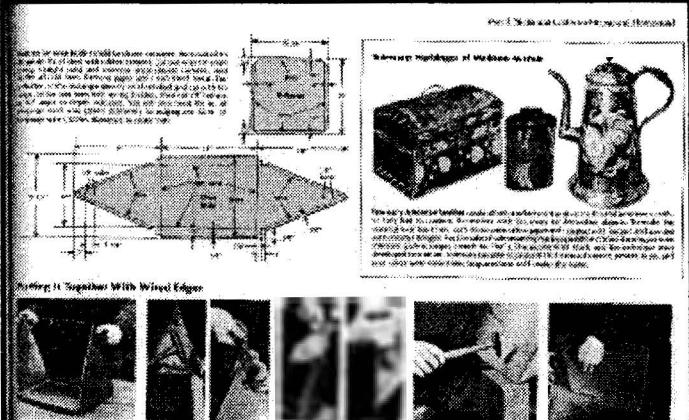
You get a big, beautifully illustrated hardcover book that will show you how to do almost everything a homesteader needs to know.

Topics include: buying country property, planning your home, preparing the site, converting trees into lumber, building a log cabin, building with adobe, building a stone house, raising a barn, developing a water supply, fences, heating with wood, waterpower, wind power, solar energy, the kitchen garden, fruits and nuts, grains and grasses, beekeeping, fish farming, livestock, preserving produce, making dairy products, maple sugaring, homemade beverages, baking bread, cooking

with wood, spinning and weaving, hooked rugs, braided rugs, rope and twine, tanning and leatherwork, woodworking, broom making, scrimshaw, metalworking, stenciling, soapmaking, candlemaking, basketry, making a mountain dulcimer, and much more.

You'll be impressed by easy-to-read text and quality illustrations throughout. Obviously each chapter could be a book in itself, so information is limited. But it's enough to get you started. At the end of each section you'll find a list of quality reference books that will help you push on.

You'll learn how to estimate the flow of a creek and use a hydraulic ram, smoke hams and fish, skin a rabbit and tan its hide,

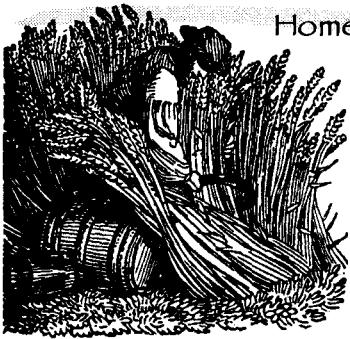


make an open cupboard for your kitchen, or turn an auto brakedrum into a blacksmith's forge. You'll even get tips on canoeing and wilderness camping.

Great book! Lots of things to try. Just plain fun to read even if you never try a thing! A bit expensive, but it delivers. If you're thinking about being more independent, this is a must-have book. Recommended. 11 x 8 1/2 hardcover 456 pages

Cat. no. 2027 \$26.00





Make Cheese!

CHEESEMAKING MADE EASY
by Ricki & Robert Carroll

Make your own cheese! Good stuff! The authors will tell you how, in easy-to-understand terms – from simple Cottage Cheese and Mozzarella to delicious Blue, Gouda and Colby cheese. You'll be surprised how easy it is. How little equipment you'll need. How inexpensive, particularly if you have a source of cow's or goat's milk. And how delicious the results, even on your first attempt. Choose your favorites from sixty different varieties.

Great book! Great photos, drawings and recipes. I'm gonna half to start making parmesan and romano for my "full-tilt" lasagna.



Maybe I'll even raise a herd of goats in the warehouse to supply milk. So if the books you order in the future smell like an old goat, you'll know...

Get a copy. A skill practiced for centuries, but one that few people know. But you will. Order today. 8 1/2 x 7 paperback 136 pages Cat. no. 653 \$9.95

Real "He-Men" cook chili so hot it could give the Devil gas! ...and they wash it down with gallons of homemade whisky...

The Manhattan Chili Co – SOUTHWEST AMERICAN COOKBOOK
by Michael McLaughlin

While you were out watching the neighbor woman through your binoculars, I was in the kitchen with a three gallon stock pot converting eight pounds of course-ground chuck roast in the best damned chili you've ever tasted. And long after your neighbor woman throws an obscene gesture at you and pulls down the shade, I'll be eating full-tilt chili out of the freezer.

You get 65 different recipes for all kinds of things like Numero Uno, the Real McCoy (my favorite), Texas Chain Gang Chili, Abilene Choral Society and Music Guild Chili, High Plains Buffalo Chili, and more. You get recipes for unusual things like Carnitas Salad, Salsa Mayonnaise, Fajitas of Grilled Pork with Chiles Chipotles and much more.

You'll get inside tips and secrets like how to toast your own cumin seed to improve its flavor and how to create your own custom chili paste. There are "secret" sources listed in the back for acquiring the best chilis, herbs and spices.

You even get a chapter on

deserts showing you how to make Mississippi mud, triple citrus ice, coconut-lime cheesecake, and a lot more.

This is my favorite chili cookbook of several I've collected in recent years. 'Tain't nothing better than some red hot chili over linguini dusted with freshly grated Romano cheese and a big glass of champagne or a stein of Bass Ale. Try it!

Get a new coating of tin applied to your cast iron stomach. Throw the ol' lady out of the kitchen, pour yourself a stiff drink and start cooking. It's fun. Being a voyeur is fun, too, but I need to fill my stomach more often than my eyes. So cook! Get a copy! 6x9 hardcover 120 pages

Cat. no. 6052 \$14.00

PRACTICAL DISTILLER

by Leonard Monzert
reprinted by Lindsay Publications

Make moonshine! Poison yourself! Go blind!

From 1889 comes this little gem of a book showing how to distill "Brandy, Gin, Rum, Whiskey, Arrac, Poteen, etc., all of which owe their respective intoxicating properties to the amount of alcohol which they contain."

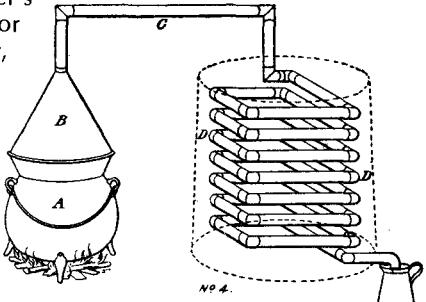
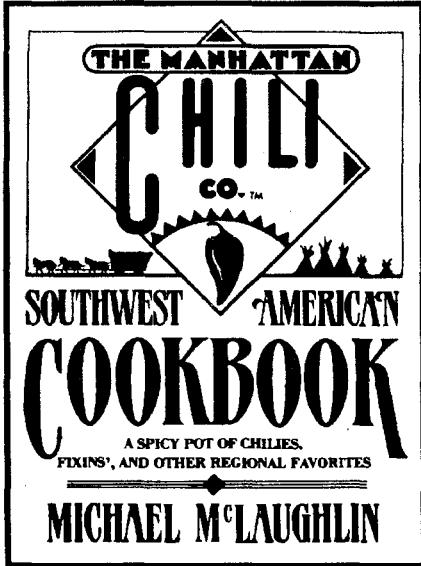
While other books show you how to make fuel alcohol, this one will show you the equipment you need to make booze. Included are discussions on the still and appurtenances, the farmer's still, directions for erecting a distillery, running a charge, the doubler, distillation of liquors, rectifying or leaching, alcohol refining, distillation of volatile oils, extracts, the water bath still, essences and liqueurs, blending and compounding and more.

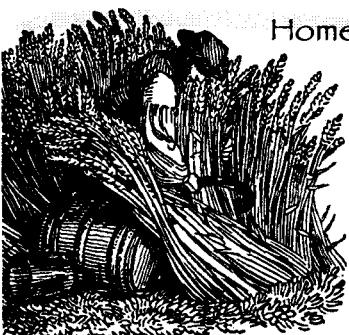
Making booze without a permit is illegal. The government wants its taxes. You can use the equipment to make fuel alcohol for your car, perfume, and even vinegar.

If you intend to make booze, you're on your own. Moonshine stills were made with galvanized iron, old radiators, and other nasty metal that could poison you. Besides, "white lightning" tastes like lightning because it isn't aged or mellowed in barrels. It's nasty stuff. And you'll find little information here on turning out really good whiskey. This is a book on equipment, not gourmet cooking.

A great curiosity. Rare information. I won't tell the WCTU or BATF you're ordering copy. 5 1/2 x 8 1/2 paperback 156 pages

Cat. no. 4589 \$8.95





Tan Hides! Make Leather!

**TAN YOUR HIDE!
HOME TANNING
LEATHERS & FURS**
by Phyllis Hobson

Learn what you need to tan your own leather and fur, and all the steps involved in doing it right. If you hunt or raise animals for meat, you can convert the hides into beautiful leather. Once you do, you can use the special section in the back of this book to get started making mittens, fur hats, leather vests, holsters, belts, knife sheaths and more.

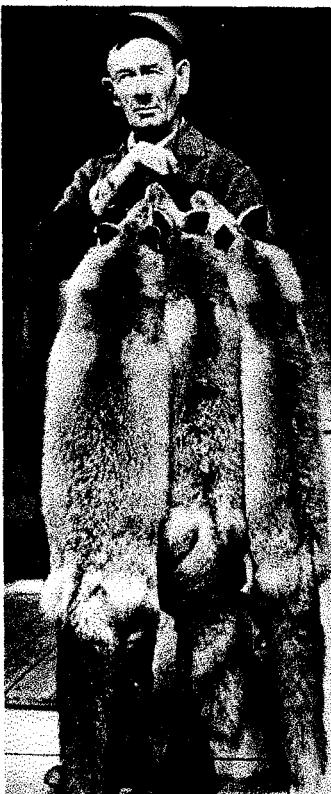
You'll find that tanning leather is very inexpensive, but is labor intensive — a lot of work. But that's part of the fun. How many people do you know tan their own leather?

The authors will tell you what tools and chemicals you'll need, how to select the hide, the steps for tanning leather and fur, how to test for tanning, old-time Indian tanning methods, how to make your own dyes, what qualities of leather to look for, which tools you need for leatherworking, basic leatherworking techniques, where to find tools and supplies and more.

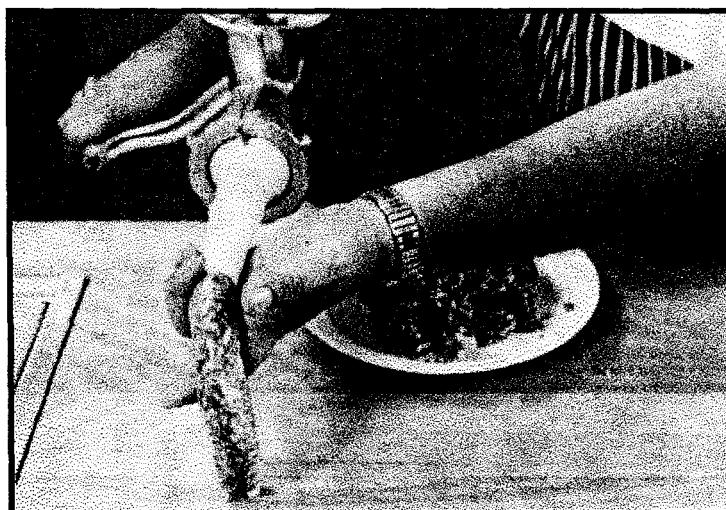
This is a classic book first published in 1977 and is now in its 17th printing! Excellent book. Also useful for keeping your mother-in-law in line. Next time she hassles you, threaten to tan her hide. Show her this book, and she'll know you mean it! Get a copy! 5 1/2 x 8 1/2 paperback

135 pages
Cat. no. 62

\$8.95



and she'll know you mean it! Get a copy! 5 1/2 x 8 1/2 paperback
135 pages
Cat. no. 62



CIRCULAR SAWMILL BLADES

CIRCULAR SAWMILL BLADES
reprinted by Lindsay Publications

These pages, reprinted from two different 1880's books, will show you how to make, set and true up circular sawblades. You'll get a brief lesson on setting saw teeth and on hammering a bent circular saw blade back into truth — only a few pages long but the best explanation I've been able to find yet.

Pages from the second book "Leffel's Construction of Mill Dams and Bookwalter's Millwright and Mechanic" from 1881 will reveal how two different sawyers of 30 years experience take a sheet of steel and layout a 50" circular sawblade from scratch. This method pro-

duced blades able to saw, before resharpening, as much as 4500 feet of bark-covered hardwood taken from the Missouri river still embedded with sand and grit.

And you also get another set of brief instructions on hammering a blade back into truth.

Rare information! Anyone even thinking of building or running a sawmill MUST have this. The original books cost me a fortune, but your cost is practically nothing when you consider the rarity of the information. Order a copy! 5 1/2 x 8 1/2 booklet 22 pages

Cat. No. 896 \$3.50

Fast and Efficient!

I wish to commend your company for its unusually fast and efficient service. When ordering by mail, I am accustomed to waits of four or more weeks. However, I was pleasantly surprised by your short delivery time. I placed my order on the 11th of this month

and received it on the 23rd. That's less than two weeks!

I also found the books to be exactly what I wanted. Of course, a couple were little more than typewritten booklets, but that is exactly how they were described in the catalog.

Thank you for the good service and quality books. Count me as a loyal customer.

David Lantrip
Gainesville FL

MAKE YOUR OWN SAUSAGE!

HOME SAUSAGE MAKING
by Charles Reavis

Make great mouthwatering sausage! Over 32 types — both fresh and cured. It's all here! Make summer sausage, Genoa salami, mild salami, bratwurst, frankfurters, bologna, kielbasa, Braunschweiger, chicken sausage, and varieties from bison, squirrel, opossum, rabbits, and even fish! You get over 175 recipes in this great how-to manual and cookbook! Order a copy. 8 1/2 x 11 paperback 168 pages
Cat. no. 635 \$13.95



TOP SECRET RECIPES
Creating Kitchen Clones
of America's Favorite
Brand Name Foods
by Todd Wilbur

Wanna make your own Sara Lee cheesecake? Kentucky Fried Chicken? Mrs. Fields chocolate chip cookies? Twinkies? Big Macs? Orange Julius? Gawd! I get a belly ache and a bad case of

gas just thinking about this food. But you can duplicate it if this is the kind of stuff you like to eat.

No, these are NOT official recipes. In a sense, they're better than the original because they taste like the real thing, but don't have the preservatives and colors and all of that. And it could be an awful lot of work to make clones of Reese's Peanut Butter cups. But wouldn't

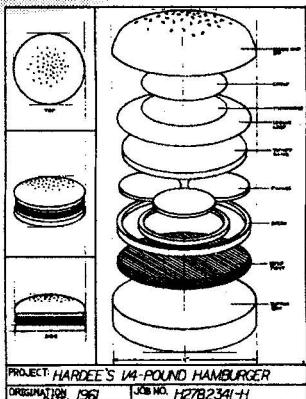
TOP SECRET RECIPES

it be fun to brag that we made these look-alikes ourselves?

You can build your own version of a Burger King Whopper, Ben & Jerry's Heath Bar Crunch Ice Cream (I've done this, and it's great...), Dairy Queen Blizzard, Jack-in-the-Box Taco, Kahlua Coffee Liqueur, Snickers candy bar, Wendy's Chili, and much more. Sorry, no clone recipe for making a bottle of Maalox.

Interesting book if you like to cook. Course, after seeing this, you may just want to take up cooking. Enough said. You order this book while I go take care of my nausea. 5 1/2 x 8 1/2 paperback 134 pages
Cat. no. 6057

\$10.00

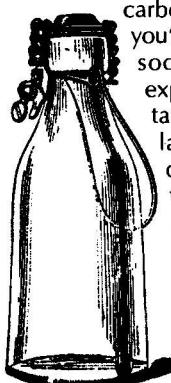


SODA POP!

Make your own soda! It's easy!
And it's great soda!

Build this remarkably simple device using hardware store components, hook it to a bottle of carbon dioxide, and you're ready to make soda. The major expense is the CO₂ tank and its regulator. But you'll quickly recover that cost in a single summer.

You can make great root beer, carbonated Kool-Aid, Coca-Cola, and other drinks at bargain prices. You can make gallon



MAKE SODA POP!

after gallon of soda water for ice cream sodas or for mixing with your favorite scotch. Experiment!

It's one of the most useful and popular machines (at least with the kids) I've ever built. A single small tank of CO₂ last me about a year, and that's an ocean of soda. Each jug is very inexpensive. Get a copy, and build a soda pop machine! 5 1/2 x 8 1/2 book 22 pages

Cat. no. 88

\$3.00

THE GREAT T-SHIRT BOOK!

by Carol Taylor

From the back cover:

"T-shirts — comfortable, inexpensive, and fun to wear, they just may be the most popular clothing in the world. Now you can take any plain T-shirt and turn it into something great! Simple, east-to-follow directions and 75 fantastic designs shown here in big, glorious, full-color photographs show you how to add color, style, slogans, and individuality to one-of-a-kind kids' and grown-ups' T-shirts. You'll use textile paints and fabric crayons, learn how to make your own design stamps, and create fabulous originals with tie-dye, batik, marbling, block printing, and screen printing techniques. What a collection! And what a terrific way to build up a T-shirt wardrobe. Blazon your own slogans and creative designs on T-shirt gifts, play clothes for kids, sports team and club shirts. Discover the joy of fabric paints and expressing your own creativity. You and your kids and friends will wear your T-shirt creations with pride."



High Fashion T-Shirts!

T-Shirts? Are you kidding? These t-shirts are better looking than the suit I wear! And that's why I offer it. These shirts are works of art. They're flat out beautiful.

The first chapter shows you the basic techniques of applying color. The rest of the book is color page after color page of incredible t-shirts along with a brief paragraph on how each was done. You have to see it to believe it. I would be proud to say I had made any of the shirts pic-

tured. Compared to simple (or even complex) silk screened t-shirts, this is a whole new ball game. This is fine art. It will fire you up so badly you won't be able to wait to give it a try.

Unusual. Quality. Inspirational. Looking for a new creative outlet? Try this! (May you could sell these beauts for big bux!) Get a copy! 8x9 paperback 112 pages color illustrations throughout
Cat. no. 6058

\$12.95

Dear Lindsay,

I want to thank you....
Your way of doing business is beyond great.... It's outstanding!

K N Buchheit

(Every business could learn from you and the way you conduct business)

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Please use your customer number when ordering. You'll find it on the upper right corner of your shipping label. It helps us get your order out quickly and accurately, and will help us ensure that you get future catalogs.



Stay Alive in the Woods!

HOW TO STAY ALIVE IN THE WOODS

by Bradford Angier

"For over twenty years, sportsmen, hunters, and camping families have been carrying this book with them every time they venture into the woods. It is a life-saving tool which details all of nature's resources and shows — in 26 clearly written, illustrated chapters — how to find food, water, warmth, and shelter when lost or stranded.

The book is full of secrets that can help save time, energy — and even lives. For example, it tells: how to spark a fire by using a drop of water as a lens; how to obtain meat and fish by primitive means; and how to protect yourself against natural hazards..."

That pretty well says it. This "drug-store" paperback is wall-to-wall practical tips and how-to. Lots of quality information for a low price. A classic! Get one! 4 x 7 mass paperback 285 pages. Cat. No. 682

OVER 600,000 COPIES SOLD

HOW TO STAY ALIVE IN THE WOODS

A complete guide to food, shelter, and self-preservation that makes survival in the wilderness next to impossible!

BRADFORD ANGIER

\$8.00

DUMPSTER DIVING!?

THE ART & SCIENCE OF DUMPSTER DIVING

by John Hoffman

I gave up alley-picking years ago. I had to. The warehouse was full, and I needed the space to store pallets of books. But you may still be at it. If so, you'll probably enjoy this.

Comments from the backcover:

"Dumpster diving takes you on a roller-coaster tour of America's back alleys. You'll see amazing wealth carelessly discarded: Food — tons of it — in clean, sanitary packaging; Clothes, often freshly washed and folded; Building Supplies; Furniture; Toys, Cassettes and CDs' Books; Flowers; Photographs; Documents and much more!"

Dumpster Diving will show you how to get anything you want — anything you need — absolutely free!!! in step-by-step, illustrated detail, John Hoffman shows how to dress for dumpster diving success, work your neighborhood dumpsters, dive a restaurant, use food salvaged from dumpsters, use a 'bag blade' and 'dive stick', handle run-ins with the authorities, convert your trash to cash and much more...

As you learn the secrets of an extraordinary Master Diver, you will hear outrageous anecdotes from a lifetime of garbage picking. Watch as the author eats from bloated cans! Look away as he dives into hospital waste! See a relentless information diver shut down an abortion clinic...."

This is a bizarre book. In some ways, just plain trashy. But there ARE some tips to making money alley picking, and there ARE references to

other books (I haven't seen yet) on making money by collecting scrap.

I'm not going to tell you this is a great book. But it IS one of a kind. And there IS, more than likely, useful information in it for you. Especially if you're wondering whether it's worth doing or not.

Consider it. So-so illustrations. Unusual content. And stay away from MY dumpster.... 8 1/2 x 11 paperback 152 pages
Cat. no. 6051

\$12.95



Will You Survive?

OUTDOOR SURVIVAL SKILLS

by Larry Dean Olsen

From the back cover:

"This is the revised and expanded fifth edition of the classic manual on outdoor survival. Chapters on shelter, fire, water, plants, animals, and special skills explain how to:

- build a learn-to; brush, pole, or grass thatch, wickiup; wattlework shelter; snow cave
- make fire with flint, bow drill, hand drill, fire saw; make a fire carrier or bundle
- obtain drinking water from dew, water pockets, an evaporation still
- harvest and prepare food plants in the wild
- fashion tools and weapons from stone, bone and wood
- make rawhide, tan leather; weave bark and other natural fibers
- harvest grasshoppers, ants, grubs; trap, hunt and stalk larger game; make fish hooks, traps and spears"

With this information you can walk into the wilderness with just the clothes on your back and survive! Some people believe that the wackos in the mid-East might bomb us back to the stone age (to quote Gen. LeMay). It might pay to be ready to live like a caveman!

Native Americans knew these things two centuries ago. But who knows today? You can! Get a copy. Well-illustrated. 6x9 paperback 224 pages
Cat. no. 6041
\$11.95

WINDMOTORS

WINDMOTORS

by F. E. Powell

reprinted by Lindsay Publications

Put the wind to work with one of these turn-of-the-century designs.

You'll learn about different types of windmills, some of them unusual. Then you'll be shown how to build a model tower windmill similar to those in Holland.

Chapter 3 will show you how to build a real power-producing windmill with three foot diameter sails. It may be a small windmotor, but it can drive a small dynamo. You get all the important design details.

In Chapter 4 you are shown how to build a 6 foot diameter windmill capable of driving a 30 watt dynamo at 16 mph. You'll see many detailed drawings showing how the all-wood machine is built, and how metal gearing brings the power down to ground level.

Another chapter reveals a 10 foot diameter windmill. The last chapter gives you tips on generating electricity—high tech in 1910! Obviously better generators are available now, but the basic principles still apply, and the control methods still work.

I think you'll enjoy this book. These mills may not be as hot as modern designs, but building one of these babies should be relatively easy and low-cost. You get great designs from a simpler time when simpler materials were used to get surprisingly good performance.

A really nice little book to have. Low cost. Get a copy.
5 1/2 x 8 1/2 paperback 88 pages well-illustrated
Cat. no. 4279

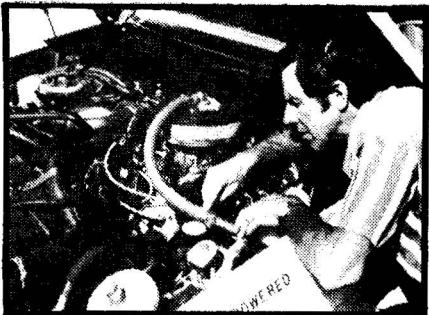
\$6.50

FUEL FROM WATER

by Michael A. Peavey

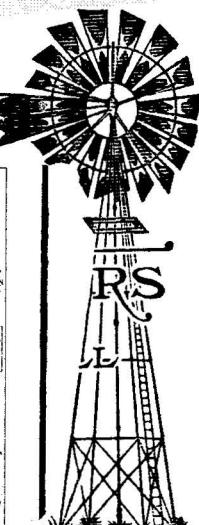
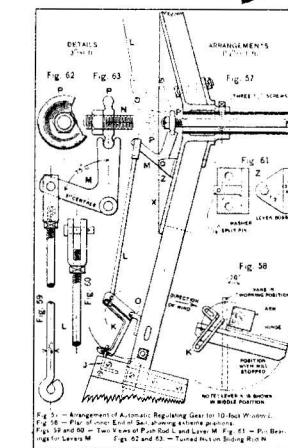
Here's the best book of its type that I've seen yet. You'll read about hydrogen generators, storage devices, modifications of autos for using hydrogen fuel, the hydrogen homestead and more. You'll learn about batteries and inverters for providing 110 VAC for the home without connecting to the power company. You get lists of manufacturers, other books, and sources of additional information. This well illustrated, typewritten manual gives you what is obviously hard-to-find information.

Nicely done. I'd like to offer more books like this. Rare information. I think you'll like it. 8 1/2 x 11 paperback 80 pages
Cat. no. 2010



FUEL FROM WATER

\$16.00



Windpower for Home and Business

WIND POWER FOR HOME & BUSINESS

Renewable Energy for the 1990s and Beyond
by Paul Gipe

Good books and new books on alternate energy are hard to find. Here's one that is both new and good.

From the back cover:

"This is the most comprehensive guide to modern wind machines available. These rugged, cost-effective designs are suitable for homeowners, farmers, and small business owners already served by electricity, as well as for those who want to live 'off the grid,' beyond the reach of utility lines. Whether powering all or only a portion of a user's needs, modern wind turbines make economic and environmental sense today."

WindPower for Home and Business is for those who want to know how wind energy works, and how they, too, can tap this abundant renewable resource. It explains how to measure the wind, how to estimate the output from typical wind turbines, how to evaluate the best technology for each application, and how to install and operate a small wind power system safely..."

Chapters include introduction, how to use the wind, measuring the wind, how much to expect, does wind pay?, what works and what doesn't, towers, cutting costs – not corners, buying a wind system, interconnection with the utility, stand-alone power systems, pump-

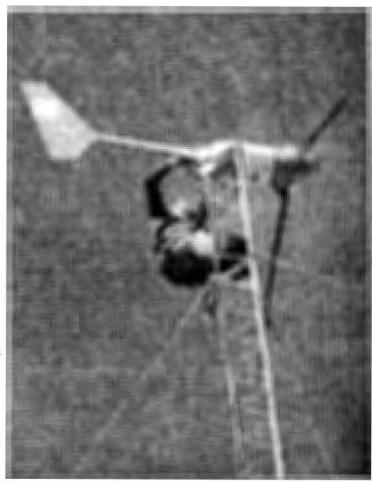
ing water, siting, installation, operating and maintaining a small wind system, safety, looking to the future, and appendices.

You get a well-written information-packed book that will deliver loads of information. By far my biggest complaint is the price. I think it should sell for half the price, but I can't do anything about that. I guess the publishers figure that not that many people are that interested in the wind. And I know from experience how expensive it is to publish small quantities of book. The price has to be high.

The good news is that it IS a good book. The bad news is that you're gonna have to pay if you want it. If you want it, then order it soon. It may soon get bumped out of this catalog in favor of other books. Consider it carefully. 6x9 paperback 413 pages

Cat. no. 2030

\$35.00

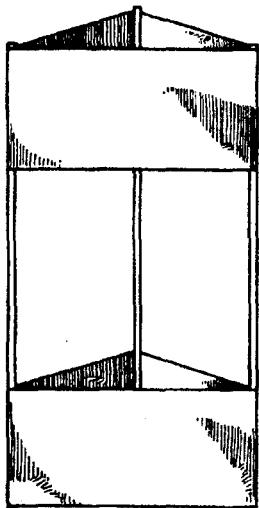




25 KITES TO MAKE

as an English kite, five-point kite, or an elephant kite. And you can make compound kites such as a square box kite, a military kite, or a cross kite. You also get chapters on flying hints, accessories you can build, and miscellaneous useful information.

A great reprint from 1929. Low cost! So affordable, in fact, you can give a copy to each of your in-laws, and tell 'em all to go fly kites! ...while you slip off to the shop. Get a copy. 5 1/2 x 8 1/2 paperback 110 pages Cat.no. 467 \$2.95



25 KITES THAT FLY

by Leslie L. Hunt

Next time your wife complains that you spend too much time in the shop and not enough time socializing with your in-laws, tell her to go fly a kite. Hand her this book when you do.

Learn about kitemaking in general. Learn how to make tail-less kites such as a butterfly kit, a yacht kite, or a bow kite. Or try making a plane-surface kite such

Build a Sundial!

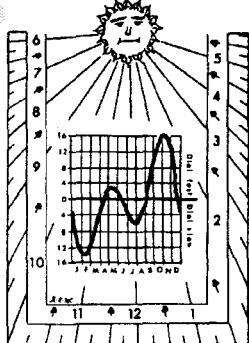
SUNDIALS

Their Theory and Construction

by Albert E Waugh

From the back cover:

"Have you ever wanted to build a sundial or to understand how one works?... This book is designed to meet sundialing needs at either the simple or the sophisticated level...."



The subject matter is arranged in 19 chapters, each covering a different aspect of dialling science. All the common types of dials are covered, but the reader can also learn about analemmatic dials, polar dials, equatorial dials, portable dials, memorial dials, armillary spheres, reflected ceiling dials, cross dials and old-fashioned noon marks. There are also sections on dial furniture, mottoes, the actual laying out of a dial, the equation of time, finding time in other cities, how to find the meridian, how to find time by moonlight even how to estimate time from the length of one's own shadow! Directions are given for designing dials for any part of the country, or any place in the world. The author has designed many dials, and his text is filled with helpful hints based on his own personal experience. There are over 100 illustrations, charts and tables, followed by an appendix which is filled with material which reduces or eliminates the need for calculation on the part of the reader...."

Good book - one we've offered in the past. If you haven't built a dial, give it a try. Great science fair or summer project for kids. Inexpensive. Interesting. Get a copy. 5 1/2 x 8 1/2 paperback 230 pages

Cat. no. 45

\$5.95

Build a Stringed Instrument!

MAKING STRINGED INSTRUMENTS

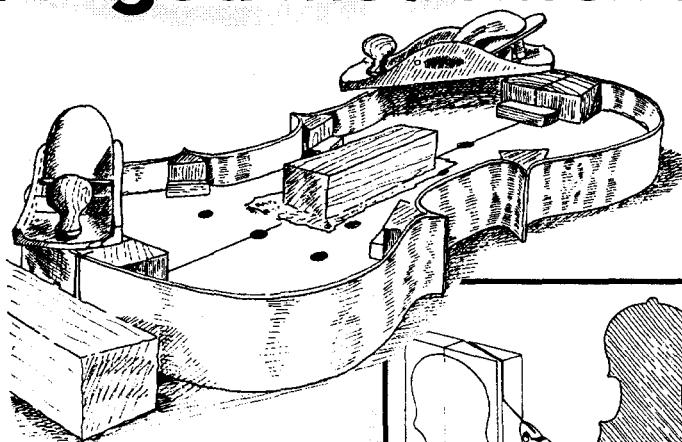
A Workshop Guide

by George Buchanan

In this well-illustrated book you get "detailed plans and instructions for violin, classical guitar, jazz guitar, viola, cello, mandolin, and mandola." Although this is a good-sized book, I at first thought there couldn't be enough detail on each instrument to make the book really worth reading. Not so. Lessons applied to one instrument readily apply to others. Stradivari not only built violins, he built violas, cellos, and double basses as well. Because these instruments are all related, you'll find there really is a surprising amount of detail.

Most of the detail and basic techniques are revealed in the first section on building violins and violas. By the time you get to the jazz guitar in the back, you're getting only the details specific to that instrument.

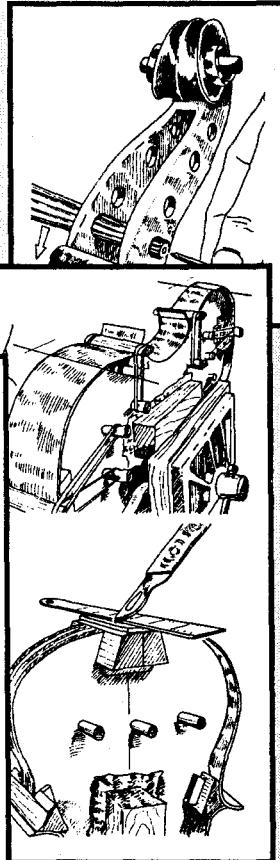
Again, I find it to be a fascinating book, beautifully illustrated



with line drawings and photos (color photos included) - one that makes me want to drop all 200 of my other projects and build a fiddle. Even if I never build a fiddle, I can do it my dreams by just reading this. You can, too. Try it. Good book. You'll like it. A bit expensive, but worth it, I think. 7 1/2 x 9 1/2 paperback 205 pages

Cat. no. 491

\$19.95



Homesteading, Survival, Alternate Energy, and more....

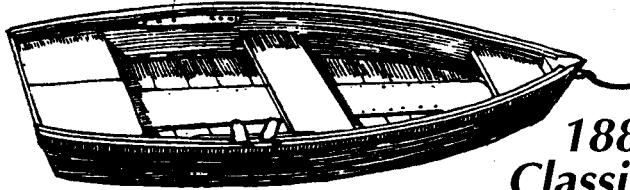
American Boys Handy Book

by D. C. Beard

"If Huckleberry Finn were to settle down, somewhere out there in the territory, and decide to become an author, he might very well come up with a book like

this one..." — Washington Post Book World

"The Handy Book was the perfect survival manual. It contained plans for 16 kinds of kites and hot-air balloons and fishing tackle. It told you how make and stock an aquarium, to construct a water telescope and how to camp out without a tent. Or in a hut made from



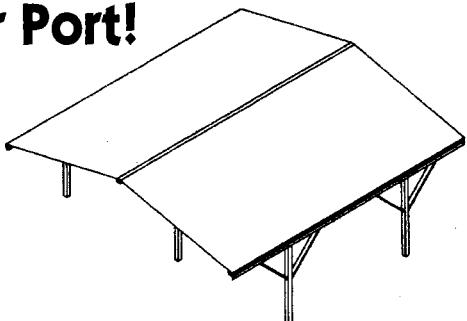
**1882
Classic!**

pine boughs. How to build 10 kinds of boats, including a flatboat with a covered cabin. Ice boats, too. One-person canoes. Bird calls. Squirt guns with astonishing range and authority..." — Henry Kisor, Chicago Sun-Times

As a kid I read an original copy in our small town library. This is a classic book. Get a copy! 5 1/2 x 7 1/2 paperback 441 pages

Cat. no. 6034 \$10.95

You can Put More Than Just a Car in a Car Port!



LOW-COST DOUBLE CARPORT PLANS

by Ken Dixon

Dixon will show you how to build a low-cost shelter consisting of a sturdy frame covered with a tarpaulin. It will provide a surprising degree shelter for your car. OR shelter for logs you may have drying. OR shelter for your outdoor foundry furnace (watch the fire hazard). OR shelter for your steam engine. OR, I think you get the idea.

Estimated cost looks like about \$200 (1993 prices), and as much as \$500 if you want to completely frame it out and put on a shingle roof. You get a well-done booklet with complete plans and how-to from someone who has done it. A great low-cost shelter for a craftsman. Think about it. 5 1/2 x 8 1/2 booklet 13 pages

Cat. no. 5007 \$4.95

LINDSAY PUBLICATIONS INC, PO Box 538, Bradley IL 60915 • 815/935-5353

Put Your Mother-in-Law in a Treehouse!

SHELTERS, SHACKS AND SHANTIES

by D. C. Beard

D C Beard wrote American Boy's Handbook in 1882, and it became a classic. It has been reprinted and has appeared in the pages of this catalog. In 1908 Beard helped found the Boy Scouts of America.

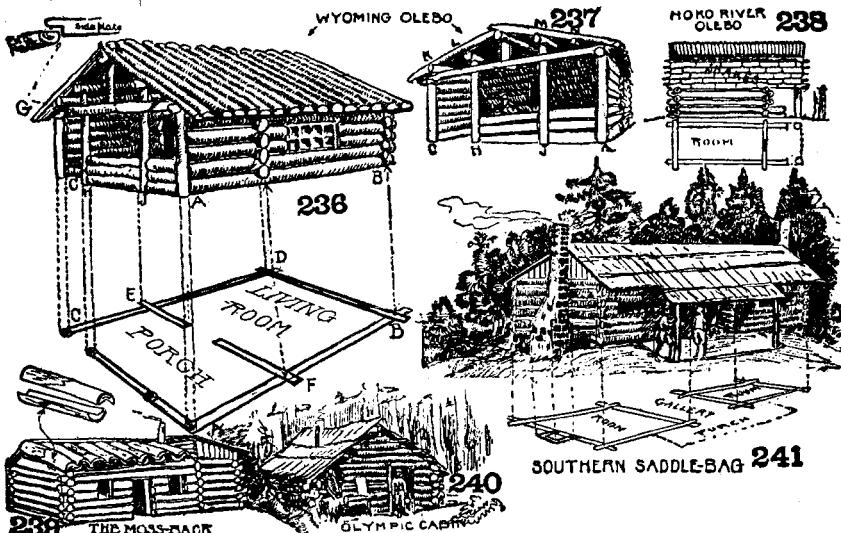
In 1914 Beard produced this well-illustrated and thoroughly entertaining book for boys of all ages (that includes you and me). Now we can shut off our computers and VCRs and learn how to build sod houses, over-water camps, railroad tie shacks (I can smell the creosote...), Navajo hogans, and log cabins. And beard will teach use how to use



an axe, build a fireplace, lay a fire and much more.

Fun book! Useful. One of these shanties could be a great place to store your mother-in-law when she feels compelled to visit. Get a copy. Reasonably priced. I think you'll like it. 5 1/2 x 8 1/2 paperback 243 pages

Cat. no. 6056 \$8.95



COMPLETE BOOK OF BIRDHOUSE CONSTRUCTION

by Scott Campbell

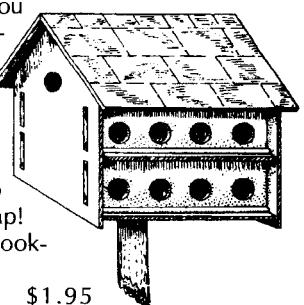
Build a birdhouse! It's easy. Learn about designing the roof, cleanouts, drainage and ventilation, entrance holes, the interior, the requirements of the birds, how to support a birdhouse, about inspection, pest guards, and more.

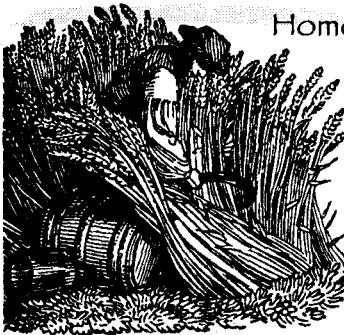
When your children or

BUILD A BIRD HOUSE!

grandchildren ask you how to build a birdhouse, you don't have to admit you don't know how. Whip out this booklet and get underway. Or give it to them as gift. Dirt cheap! Good! 5 1/2 x 8 1/2 booklet 48 pages

Cat. no. 6010 \$1.95



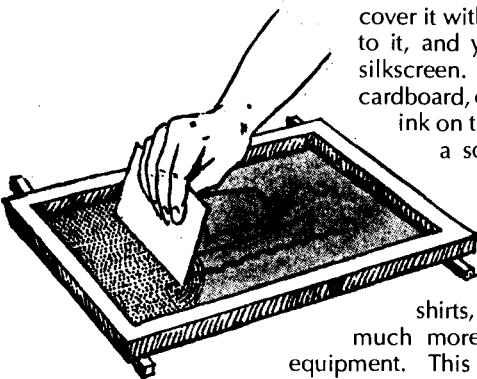


Silk Screen Printing

COMPLETE BOOK OF SILKSCREEN PRINTING PRODUCTION

by J. I. Biegeleisen

Take an old picture frame, cover it with cloth, glue a stencil to it, and you have a primitive silkscreen. You lay it on paper, cardboard, or a tee-shirt, put thick ink on the other side and use a squeegee to force the ink through the stencil. You've printed your design. It's that simple.



You can print signs, shirts, decals, wallpaper and much more without expensive equipment. This book will show you how to do everything from building the simple

frame to multi-color printing.

Silkscreen is versatile and low cost. It's a skill you should have. Here's a dirt cheap book that will show you how.

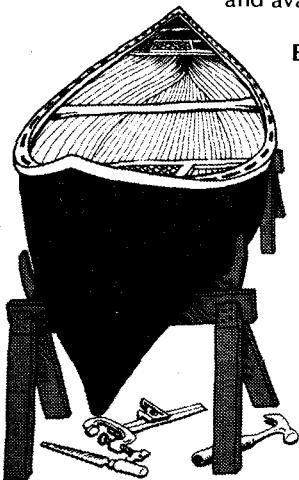
5 1/2 x 8 1/2 paperback 253 pages illustrated
No. 424

\$5.95

BACK-TO-THE-LAND BULLETINS

How-to Booklets

Each of these 32 page booklets published by Garden Way provides you with hints, tips, plans, and how-to to help you cut your cost of living, make life a little easier, and provide you with more independence. You'll find the information useful and accurate, and available at a cut-rate price.



BAKING WITH SOURDOUGH

Learn how to make a sourdough starter and use it to make a variety of delicious breads and biscuits like the gold rush prospectors did.
Cat. no. 2006

\$2.95

COOKING WITH DRIED BEANS

Beans are nutritious and low cost. Learn how to make soups, spoon bread, and other recipes. You'll eat better for less money.
Cat. no. 2020

\$2.95

BUILD A POND FOR FOOD & FUN

Select a site, clear it, and build a pond to raise fish, swim, or ice

skate in winter. Learn all the important basics.

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\$2.95

BUILDING A WOOD STRIP CANOE

Introduction into building a fiberglass covered wood strip canoe. You get sources for wood, fiberglass and detailed plans of various types. Great introduction into the process.

Cat. no. 2022

\$2.95

CHEAP TRICKS

CHEAP TRICKS

100s of Ways You Can Save 1,000s of Dollars
by Andy Dappen

You can get twice the mileage from your money by applying the tricks you'll find here.

"Even with a small income, you can save for a house, vacations, education, or a new car, but you must know the secrets of stretching a dollar. Cheap Tricks shares these secrets — it puts your dollars on the rack and stretches them 'til they scream."

You get over forty short chapters dealing with appliances, banking, babies and children, car repairs, credit cards, dental, dental tips, heating, insurance, lawns, medical expenses, showers, stains, telephones, and much more.

Some tips are quite simple, like get a clothes drier that turns off when a moisture sensor says the clothes are dry. A dishwasher full-loaded can clean as many dishes for the hot water used as

washing by hand. Spraying glass cleaner to a TV screen can damage it. There's a better way. There are manufacturer hot line numbers to give you help in repairing your major appliance. The author saved himself \$60 in repairing his dishwasher.

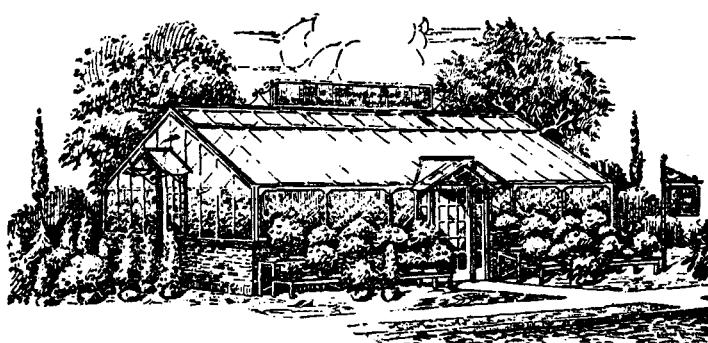
Learn how to decode the numbers on side of a tire. When you buy a new tire, you'll know exactly when it was made, and you can avoid getting a tire that's more than a year old. Life insurance? You may not need it, but you'll never hear that from an agent.

You get thousands of little tricks and tips. Some are obvious. Many are not. Each can save nickels, dimes and dollars, and that will add up to a sizeable amount quickly. Staying alive is tough these days. And this can certainly help. Order a copy.

5 1/2 x 8 1/2 paperback 404 pages
Cat. no. 492

\$13.95

HOMESTEAD! *Tell the Boss to Shove It!*



FIVE ACRES AND INDEPENDENCE

by M. G. Kainb

Tell the boss to hang it, and move to the open country and homestead! It's possible. This reprint of the 1935 original will show you as it did thousands during the Depression how to survive comfortably on five acres. You'll learn about greenhouses, coldframes, soil, manure, fertilizers, compost, tools, weeds, orchards, pruning, grafting, seeds, transplanting, berries, things to sell every day, grapes, storage, and much more. There's so much info here at such a low price, you can't afford not to have a copy. 397 pages
5 1/2 x 8 1/2 paperback
Cat. no. 608

\$6.95

The Remarkable Boy Mechanic



BOY MECHANIC - BOOK 1
compiled by H. H. Windsor
reprinted by Lindsay Publications

"700 Things for Boys to Do. How to construct wireless outfits, boats, camp equipment, aerial gliders, kites, self-propelled vehicles, engines, motors, electrical apparatus, cameras and hundreds of other things which delight every boy."

You may have thumbed through a copy of Boy Mechanic when you

BOY MECHANIC - BOOK TWO
reprinted by Lindsay Publications

"1000 things for Boys to Do. How to construct devices for winter sports, motion-picture camera, indoor games, reed furniture, electrical novelties, boats, fishing rods, camps and camp appliances, kites and gliders, pushmobiles, rollercoaster, ferris wheel and hundreds of other things which delight every boy with 995 illustrations."



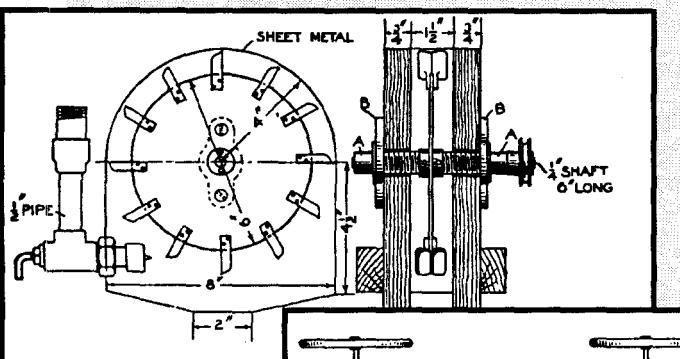
Learn how to do plane-table surveying and make accurate maps. Once you've mastered that, you'll be shown how to do the same job from carefully taken photographs. Make a four-passenger bobsled, and ice glider, snowshoes, snow-ball thrower, paddlewheel boat, tandem monoplane glider, movie camera and projector, laboratory gas generator, soap box racer, oil burner for cook stove, combination lock for a drawer, magic tricks, electric score board, disc-armature motor, and hundreds of other things.

You get wall-to-wall illustrations. You may attempt only two or three projects, but that's okay. You'll have countless hours of fun just browsing through this idea-generating volume from 1915. It's great.

Like volume one, this is a classic worth having. Fascinating! Order a copy. You'll like it.
5 1/2 x 8 1/2 paperback 473 pages
Cat. no. 20676 \$18.95

SPECIAL HARDCOVER EDITION

for libraries and collectors. Only a fraction of the printing has been so bound. May be out of stock for long periods of time depending on supply and demand.
Cat. no. 20684 \$29.95

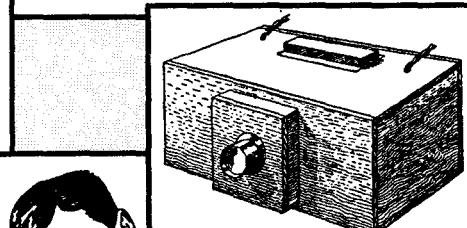
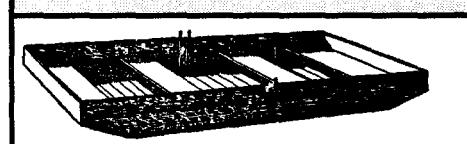
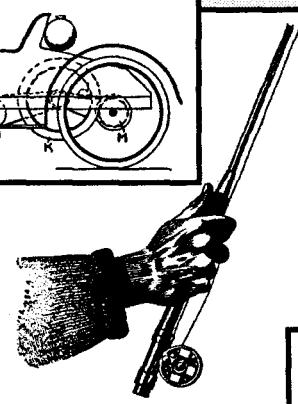
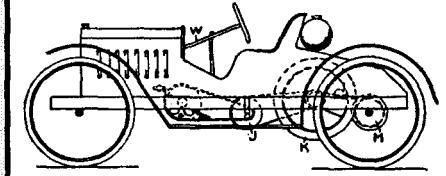
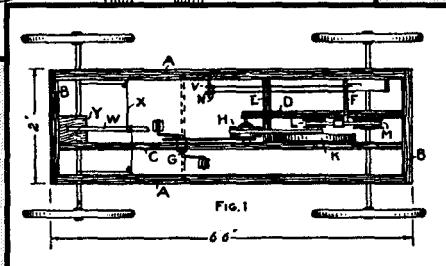


were a kid and dreamed of building just a few of the fantastic projects shown. You probably don't remember this 1913 volume.

You get wall-to-wall projects that in most cases are not too detailed, but are more than enough to whet the appetite and make you want to get started. Build a Wright-brothers style handglider! A Wimshurst machine! An arc light! An electric stove! A toy steam engine! A telegraph key! A water rheostat! An alarm clock chicken feeder! A flat bottomed boat! An induction coil! A library table! A machine to put paraffin on wire! A pipe fitting steam engine! An electric postcard projector! An ammeter! A paper hot air balloon! A workbench!

You'll find information on imitation arms and armor, magic tricks of all kinds, chair carting, sundials, homemade phonographs, gymnasium equipment, an ice yacht, a pipe fitting lathe, a paper boat, a cross bow, an electric motor, glass blowing and much, much more.

Many people have asked us to reprint the Boy Mechanic. One look through it, and you'll see why. It's a combination of practical projects, not-so-practical projects, crazy ideas, and plain ol' fun nostalgia. It's a classic book well worth your consideration. Order a copy today! 5 1/2 x 8 1/2 paperback 469 pages
Cat. no. 4880 \$18.95



THE CARTOON GUIDE TO STATISTICS

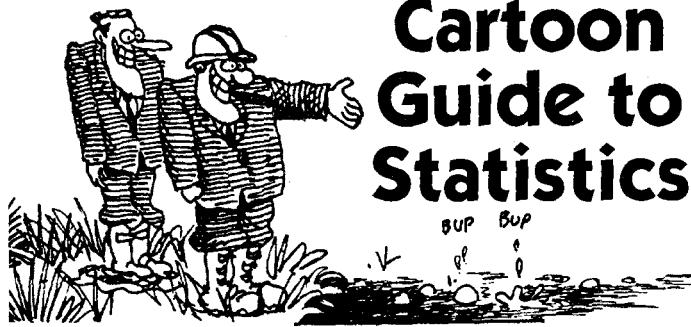
by Gonick & Smith

From the back cover:

"If you have ever looked for P-values by shopping at P mart, tried to watch the Bernoulli Trials on 'Peoples Court', or think that the standard deviation is a criminal offense in six states, then you need the Cartoon Guide to Statistics to put you on the road to statistical literacy."

It covers all the central ideas of modern statistics: the summary and display of data, probability in gambling and medicine, random variables, Bernoulli Trials, the Central Limit Theorem, hypothesis testing, confidence interval estimation, and much more – all explained in simple, clear, and, yes, funny illustrations. Never again will you order the Poisson Distribution in a French restaurant!"

Statistics is a fascinating topic that is really not that hard to understand and is extremely useful. I had this stuff in college, and there it was confusing. Here it's



Cartoon Guide to Statistics

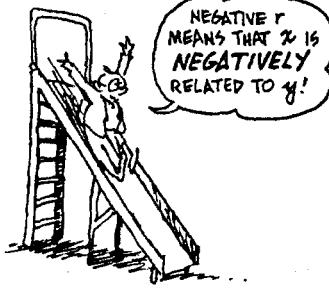
BUP BUP

ALTERNATELY, THE correlation coefficient

IS THE SQUARE ROOT OF R^2 WITH THE SIGN OF b .

$$r = (\text{SIGN OF } b) \sqrt{R^2}$$

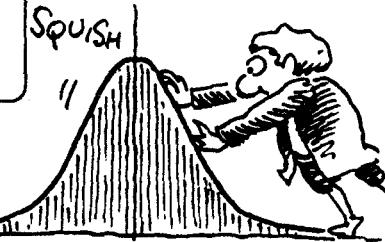
THUS, r IS + IF THE LINE GOES UP TO THE RIGHT AND - IF IT GOES DOWN TO THE RIGHT.



utility transformer to hang in an alley to drive a factory full of spot welders. Statistics keeps useless drugs off the market. NASA uses this stuff to greatly reduce component failures. JPL used statistics get beautiful, clear, color photos back from Jupiter and Saturn. And if you're going to Vegas, well....

Statistics allows us to put numbers on seemingly random events. It gives us the ability to predict the unpredictable. You can tap into statistics. Learn from scratch, or use this along with other texts. Use it as a review. I like it. One of the better math books I've seen. Consider it.

7 1/2 x 9 paperback 230 pages
Cat. no. 599 \$13.00



Be A Speed Demon with Numbers!

HOW TO CALCULATE QUICKLY

by Henry Sticker

From the back cover:

"Do you want to double or triple the speed with which you calculate? Can you run a rapid mental check over the results of your calculating machines? Can you check bills worked out for you by grocery store cash registers, on waiters' checks, on department store charge accounts? Or do you simply take their word for the disposal of your money? Don't envy friends who can perform these calculations with lightning speed and complete accuracy. Theirs is not wholly an inborn ability. You can acquire these skills by the methods described in this book."

How to Calculate Quickly is a tried and true method for helping you in the mathematics of daily life - addition, subtraction, multiplication, division, and fractions.

The author can awaken for you a faculty which is surprisingly dormant in accountants, engineers, scientists, businessmen and others who work with figures. This is 'number sense'—or the ability to recognize relations between numbers considered as whole quantities. Lack of this number sense makes it entirely possible for a scientist to be proficient in higher mathematics, but to bog down in the arithmetic of everyday life.

This book teaches those necessary mathematical techniques which schools neglect to teach: Horizontal addition, left to right multiplication and division, etc. You will learn a method of multiplication so rapid that you'll be able to do products in not much more time than it would take to write the problem down on paper...."

If you're not afraid of a milling machine or a ladle full of molten metal, then why should you be afraid of numbers on paper? On in this case, in your head? Math is a tool. Anyone who avoids math because they're intimidated by it is letting an extremely powerful tool go unused. This inexpensive book of tricks can help you get better use from simple math. Valuable for everyone. Dirt cheap. Get a copy. 5 1/2 x 8 paperback 185 pages

Cat. no. 598

\$3.95

Precalculus Mathematics!

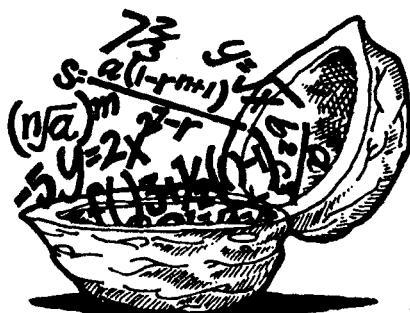
PRECALCULUS MATHEMATICS IN A NUTSHELL

by George Simmons

You can quickly learn or review geometry, algebra, and trigonometry with this excellently written and illustrated paperback.

To really understand calculus, most often it's helpful to explain what's happening with pictures of geometric figures and curves. For instance, calculus uses the process of integration to find the area of irregular areas. Geometry and trig do much the same thing but on a much simpler basis. So

it makes sense to understand the simple techniques before you jump into the more complex (and much more useful) techniques of calculus.



Algebra is simply the shorthand of calc — a way of solving for unknown quantities.

You need to understand it, too.

Get a copy of this. It's simply written, and beautifully illustrated. If there's any fault, it's that each explanation is too short. On the other hand, if they were lengthy, the book couldn't be called "in a nutshell". Quality. It delivers. 7 x 9 paperback. 119 pages.

Cat. No. 549

\$12.95

Practical Math!

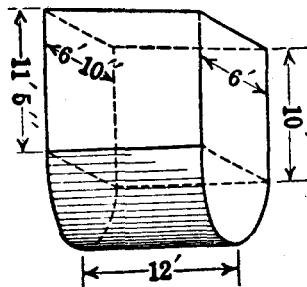
One of the Most Powerful Tools Ever Devised!

PRACTICAL MATHEMATICS FOR HOME STUDY

by Claude Palmer

reprinted by Lindsay Publications

People laugh at me because I carry a pocket calculator in my shirt pocket like any died-in-the-wool nerd would. But the joke is on them. I discovered long ago that math is an extremely powerful tool that can save work, time, and money. Those who laugh



don't know how to harness the power of math. The basic math techniques I carry around in my head and use with my calculator are explained in this book from 1919.

Math is important to mechanics and machinists. It can mean the difference between having a design fail or getting it right the first time. If you're rusty on your math and need a good review, this is the book you should have.

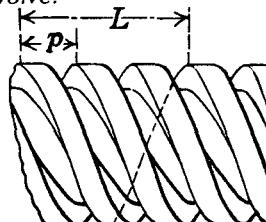
Chapters include common fractions, decimal fractions, short methods, weights and measures, percentages, ratios and proportion, density and specific gravity, and powers and roots.

The geometry chapters cover plane surfaces, triangles, circles, graphical methods, prisms, cylinders, pyramids and cones, spheres, and other solids.

The algebra chapters include notation, formulas and translations, positive and negative numbers, addition and subtraction, exponents and powers, quadratic equations, variation, graphics, logarithms, angles, trig functions, trig tables, right triangle, and more.

You'll learn the math in short, clearly explained lessons. Then you'll be asked to solve problems like "Two steam boilers of the same shape are respectively 12 ft and 15 ft long. Find the ratio of their surfaces." After you solve the problem, you can check it against the answer given.

Another problem asks "To what diameter should a piece of stock be turned so that it may be milled to a hexagon and be 1 3/4 in. across the flats?" -or- "If a wrought-iron bar 2 in. by 1 1/4 in. in cross section breaks under a load of 125,000 lb., what load will break a wrought-iron rod 2 1/2 in. in diameter?" -or- "The pulley on the headstock of a lathe is 3 in. in diameter. This is belted to an 8-in. pulley on a shaft that makes 420 revolutions per minute. At what rate will a block of wood placed in the chuck revolve?"



Triple Threaded.

You'll be able to solve these and hundreds of other problems.

If you've forgotten the math you once knew, or you want to expand your abilities, get a copy of this. It's a big book loaded with valuable lessons. The price is a little bit on the expensive side, but the most comparable modern book I've seen sells for more than twice this one.

Get a copy and get going. It's an excellent text. A great reference. Worth having. Order a copy today. 5 1/2 x 8 1/2 paperback 518 pages

Cat. no. 4775 \$12.95

Great Calculus Books!

PROF. E. MCSQUARED'S CALCULUS PRIMER
by Swann & Johnson

This is the craziest math book I've ever seen! I had calc in college but never in comic book form like this! You should order a copy of this and learn what it has to teach.

Calculus is the difference between engineers and non-engineers. If you would like to read engineering texts and understand what they're talking about, you need a calc background. This won't make you a pro, but you'll understand what functions and discontinuities are, limits, and derivatives. You'll pick up the language and be able to understand scientific talk.

It will take work on your part, but I've never seen a more brilliant explanation of what's happening. This is a tool like a lathe or a table saw. Learn this skill, and it will return dividends for all the years you have left to live. An unusual way to learn the core concepts of calc. 8 1/2 x 11 paperback 214 page comic book.

Cat. No. 51

\$19.95

CALCULUS MADE EASY
by Silvanus Thompson

Fear is often the biggest obstacle to learning math — all those strange symbols! When a calculus book starts out in the first sentence of first paragraph on the first page explaining what the most scary symbols mean, you know it's a good book. The author obviously wants to teach you something rather than scare you.

Any scientist or engineer will tell you calc is a tool not much different from a welder or a lathe. But I took calc from a mathematician in college, and that jerk thought calc was an art form! Most of the time I didn't know what he was talking about (I'm not sure he did either). Who's looking for beauty in numbers? I need to solve problems.

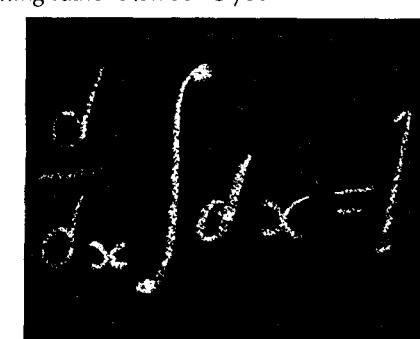
This shows you how useful calculus is. It is as practical an approach as I've ever seen, and the author really takes the fear and confusion out of teaching this math.

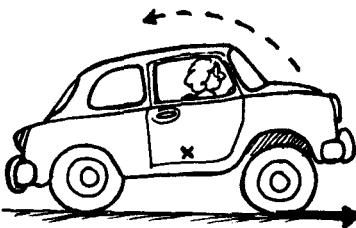
Don't get me wrong. Just thumbing through this book is NOT going to teach you calc. You're going to have to work at it. But Thompson's approach is down to earth, and he covers it all: differentiation and integration. And this is 90% of the heavy math you see in engineering books.

A lot of book for the money! If I had had this book at the same time I had that madman mathematician, I probably would have learned a lot more. It's too late for me, but not for you. Order a copy. 5 1/2 x 8 1/2 paperback. 250 pages.

Cat. No. 52

\$8.95





Physics! The story of how the universe really works!

THINKING PHYSICS

Practical Lessons

in Critical Thinking

by Lewis Carroll Epstein

I think most people are ostriches. They bury their heads in the sand rather than explore and marvel at some of the simplest things around us. They think I'm a wacko because I'm curious. You're reading a catalog that is a result of curiosity. If you're reading this, then you're obviously a wacko like me. And this book is for the curious like us.

You get a collection of puzzles that make you think, teach you lessons, and point out curious things you've haven't gotten to yet.

"A dragster starts from rest and accelerates to 60 mph in 10 seconds. How far does it travel during those 10 seconds?" Next page: "The next dragster is so

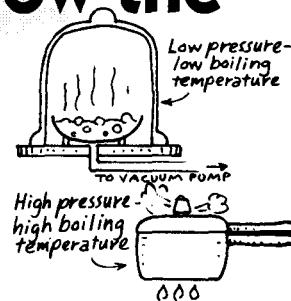
stripped down that it does not even have a speedometer. At maximum acceleration from rest it goes 1/10 of a mile in 10 seconds. What speed did it get up to in those ten seconds?" Page 48: "If a can of compressed air is punctured and the escaping air blows to the right, the can will move to the left in a rocket-like fashion. Now consider a vacuum that is punctured. The air blows in the left as it enters the can. After the vacuum is filled the can will a) be moving to the left b) be moving to the right c) not be moving."

Page 147: "By glancing at the night sky you can immediately estimate your a) latitude b) longitude c) both d) neither" Page 244: "A block of metal with a white surface and block of metal with a black surface of the same size are each heated to 500°C. Which radiate the most energy?"

Page 425: "Is it possible to make a magnetic field without the use of iron?"

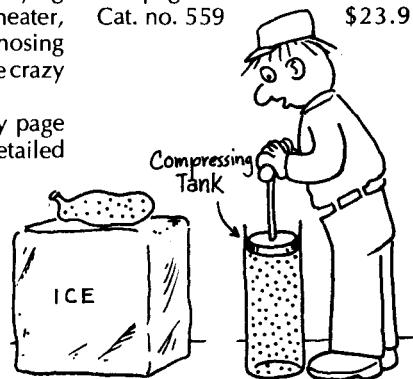
You'll find puzzles on kinematics, momentum, rotation, gravity, fluids, heat, vibrations, gravity, light, electricity & magnetism, relativity, and quanta. And within these topics you'll find fascinating details about an artificial aurora, synchrotron radiation, time warp, a magnifying glass in the sink, a quartz heater, the quicksilver sea, the nosing car, a popcorn neutrino, the crazy pulley, and much more.

At the bottom of every page printed upside down is a detailed explanation of the answer. And every puzzle is illustrated. This is a fun way to learn about the world around you. And I don't care if you have had a number of



courses in physics, this will make you think. It's a fun, educational book. Guaranteed to teach you valuable lessons. Expensive, but worth it. Get one! 6x9 paperback 562 pages

Cat. no. 559 \$23.95



Classic College Physics Text! A Master Reference!

COLLEGE PHYSICS

by Sears, Zemansky & Young

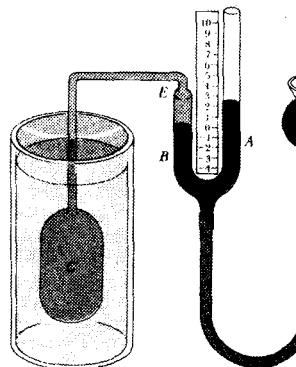
If there was ever a classic college physics text, this is it. It has been around a LONG time (since 1947). I was referring to this text when I was in high school researching adiabatic, isentropic expansion processes for liquid air machines. It was great then, and it's better now.

govern energy and its use. If you intend to design machines, you should certainly know the simplest things such as the laws of motion, center of gravity, inertia, and more. If you're into steam engines, do you know the difference between Fahrenheit, Celsius and rankine systems? What is specific heat? What is an ideal gas? How about sound and wave motion? Building a Tesla coil or Wimshurst machine? You had better study up on electrostatics. What's the definition of an ampere of current? And on and on.

If you try to build anything of any complexity that comes anywhere near modern state-of-the-art, you had better know what's in this volume. If you don't, you'd have a better chance of hitting the moon with a slingshot

This is a 'must have reference' book. Every public library should have a copy. Every designer, builder, researcher, and experimenter should have a copy for reference. It's far too expensive, but then, it IS a college text that is being constantly updated. This is the most recent edition. This is the way the real world works, and I'll bet you don't even know a tenth of what's in here. It doesn't have to be that way. Get yourself a copy, and get learning. It's great! 8x10 hardcover 880 pages

\$67.75



all aspects of

physics which should be of importance to any mechanic and any experimenter. You'll find plenty of math, none of it too heavy, that allows you to predict the performance of everything from weights and springs, rockets, RL electric circuits, engines, pipe organs, electromagnets, light and lenses, spectrosopes, and even nuclear physics.

What you get in this book are the laws that

PARTIAL CONTENTS

vector addition, force, equilibrium, Newton's first law, friction, motion, average velocity, instantaneous velocity, freely falling bodies, relative velocity, Newton's second law, mass, motion in a plane, circular motion, centripetal force, motion of a satellite, work, kinetic energy, gravitational potential energy, power, mass and energy, impulse and momentum, inelastic collisions, recoil, rocket propulsion, moment or torque of a force, center of gravity, couples, angular velocity and acceleration, moment of inertia, torque and angular acceleration, parallel-axis theorem, stress, strain, elastic modulus, harmonic motion, simple pendulum, physical pendulum, pressure in a fluid, pressure gauges, pumps, surface tension, contact angle and capillary, Bernoulli's equation, viscosity, Stokes' law, Reynolds number, thermometers, thermal expansion and stresses, heat transfer, quantity of heat, heat capacity, change of phase, conduction, convection, radiation, Stefan-Boltzmann law, ideal gas, phase diagrams, triple point and critical point, vapor pressure, the cloud chamber, energy and work in thermodynamics, adiabatic process, isochoric process, internal energy of an ideal gas, heat engines, internal-combustion engines, steam engines, the refrigerator, the Carnot cycle, absolute zero, energy conversion, molecular theory of matter, Avogadro's number, molar heat capacity of a gas, crystals, periodic waves, speed of a transverse wave, water waves, sound waves, Doppler effect, electric charges, Coulomb's law, Gauss's law, electric potential energy, Millikan oil-drop experiment, cathode-ray oscilloscope, capacitors, effect of a dielectric, current, resistance, electric field of the earth, Kirchoff's rules, ammeters and voltmeters, magnetism, Thomson's measurement of e/m, the Hall effect, direct-current motor, electromagnetic pump, and much, much more....

PROCEDURES IN EXPERIMENTAL PHYSICS

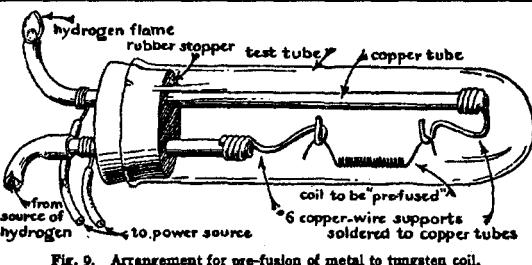


Fig. 9. Arrangement for pre-fusion of metal to tungsten coil.

PROCEDURES IN EXPERIMENTAL PHYSICS by John Stong reprinted by Lindsay Publications

If you consider yourself an experimenter, an inventor, or a builder of unusual machines and equipment, you must have a copy of this fantastic classic text. No two ways about it.

You'll find wall-to-wall practical how-to and incredible illustrations on almost every one of the more than 600 pages. Chapters include: laboratory glass blowing, laboratory optical work, technique of high vacuum, coating of surfaces by evaporation and sputtering, the use of fused silica, electrometers and electroscopes, geiger counters, vacuum thermopiles and the measurement of radiant energy, optics, photoelectric cells and amplifiers, photography in the lab, heat and high temperature, notes on the materials of research, notes on the construction and design of instruments and apparatus, and molding and casting.

This is some incredible stuff! Learn how to blow glass and make aspirators, distillation condensers, and so on. Learn how to seal copper to glass so that you can imbed electrodes. Learn how to rough cut lens blanks from large plates of glass and then grind them into lenses on your homebuilt lens grinder. Learn how to make a parabolic telescope mirror using the standard techniques. Learn to make unusual equipment to test the finished mirror. Learn how to grind a Schmidt lens.

Build high vacuum roughing pumps, getters for creating the highest vacuums, and diffusion pumps using mercury and oil. See charcoal traps, kinetic vacuum systems, vacuum gauges of all types. Remember, all this comes with construction details.

Learn how to silver mirrors with a variety of methods including vacuum sputtering. You'll find extensive details on the evaporation technique for aluminum.

Fused quartz is valuable because unlike glass it can

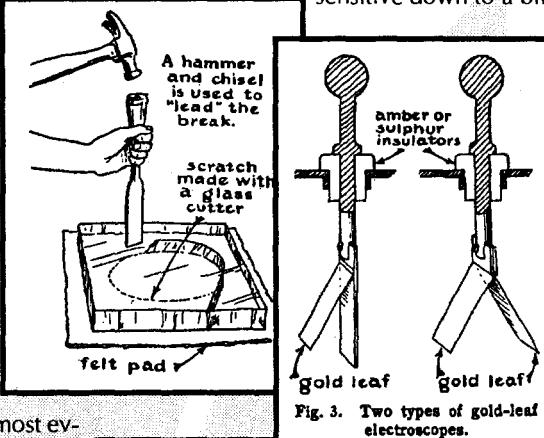
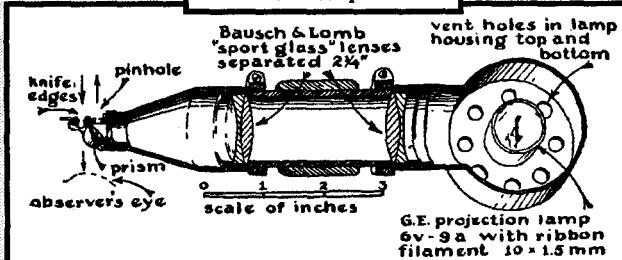
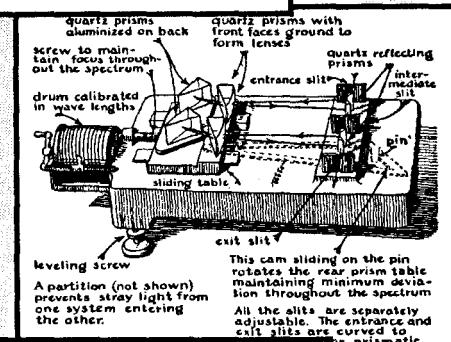


Fig. 3. Two types of gold-leaf electroscopes.



G.E. projection lamp 6v-9a with ribbon filament 10 x 1.5 mm



You'll find details on hydrogen furnaces, crucibles, burners, electric arc furnaces, and even a lab setup for making artificial rubies and sapphires! And there's much more - even down to what we consider the "easy stuff" like using a lathe and sand casting.

This is a fantastic book loaded with construction secrets for unusual equipment that you should have. First published in 1938, this baby went through a couple of dozen printings! It's a classic. It's incredible. You should have a copy for reference if nothing else. Highly recommended. Order a copy today.

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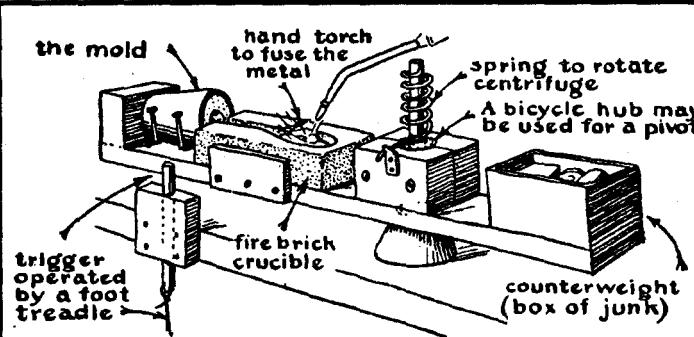
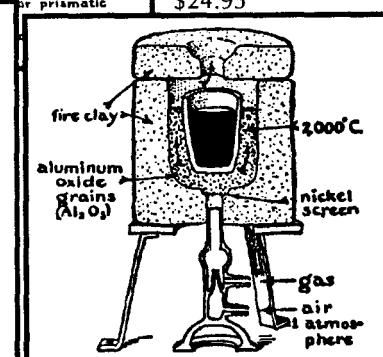


Fig. 9. Lost-wax casting. Centrifuge method for filling the mold.



Wall-to-Wall How-to! Classic Text! Incredible Illustrations!

withstand extreme temperature changes without shattering. Learn how to build micromanipulators and all the rest of the equipment to produce tiny fibers that can be used for suspending the elements of an electrometer, for cross hairs in optical instruments, or for building a balance. The microbalance shown is supposed to be sensitive down to a billionth of a gram per division!

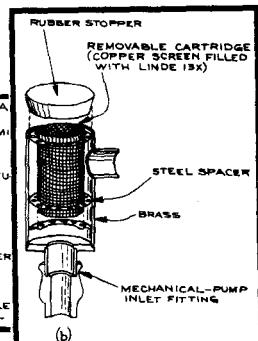
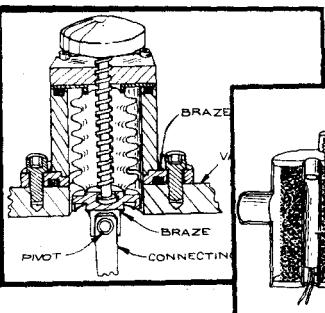
And there's so much more! Build a Compton adjustable quadrant electrometer, a Hoffman electrometer, and others useful for x-ray and cosmic ray work. Build a Geiger counter. You can build your own Geiger-Mueller tube if you master the high-vacuum technique taught earlier. Unfortunately, most of the electronics described is based on vacuum tubes of fifty years ago rather than on transistors.

Build vacuum thermopiles that measure infrared, visible light and ultra-violet so accurately that they can be used to calibrate photographic lightmeters and such. You've heard of carbon arc lights, but do you know how to build iron arc lights? Or low pressure mercury arc lights? And others? You can even build a machine to measure the wavelength of colored light.

You'll find details on hydrogen furnaces, crucibles, burners, electric arc furnaces, and even a lab setup for making artificial rubies and sapphires! And there's much more - even down to what we consider the "easy stuff" like using a lathe and sand casting.

This is a fantastic book loaded with construction secrets for unusual equipment that you should have. First published in 1938, this baby went through a couple of dozen printings! It's a classic. It's incredible. You should have a copy for reference if nothing else. Highly recommended. Order a copy today.

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BUILD SCIENTIFIC APPARATUS

New 2nd Edition!

BUILDING SCIENTIFIC APPARATUS A Practical Guide to Design and Construction

by Moore, Davis, Coplan & Greer
The ultimate equipment book is Procedures in Experimental Physics offered elsewhere in this catalog. This book is the modern equivalent. I don't think this volume in any way surpasses Procedures but it is the closest thing I've seen yet. And it's about equipment built with modern materials.

Chapters include: mechanical design, working with glass, vacuum techniques, optics, charged-particle optics, electronics, measurement and control of temperature. You also get references and a list of manufacturers and suppliers.

You'll learn about metals, alloys and their use in fabrication. You'll learn about bearings, working glass tubing, grinding and drilling glass, vacuum gauges, mechanical vacuum pumps, cryopumps, vacuum system design, cleaning optical components, features of laser design, spectrometers, Fabry-Perot interferometers, photovoltaic detectors, electron gun design, fringing-field correction, charged-particle detection, designing and building electronic equipment and much more.

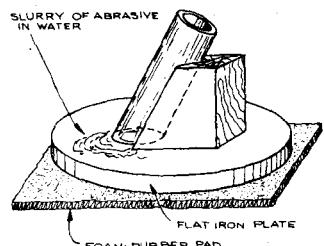
You get great drawings, charts, diagrams, equations, and more. This is modern hi-tech stuff. IC's and transistors are fabricated from semiconductors, but semiconductors also produce light. You've heard of silicon, probably germanium and gallium arsenide. But how about cadmium telluride? It's available from

Kodak under the name Irtran 6, and transmits out to 31 μm ! What do you need that for? I don't know. But neither will you unless you know this stuff is available. Then your imagination can dream up ingenious new uses.

You could be the first in your neighborhood to build a duoplasmatron ion source or a Mach-Zehnder interferometer. You could even put a bellows-sealed, wobble-drive, rotary-motion feedthrough on the mantle. Now wouldn't that raise the eyebrows of the roach exterminator next time he sprays your living room?

Knowledge of the contents of this book will push you beyond the level of the average machinist/handyman. And whether or not you use much of this material is not that important. The more you know, the more creative you can be because you have the raw material to synthesize new ideas. A smart mechanic will use this as an idea book if nothing else.

If you like to build unusual equipment, this belongs on your shelf next to Procedures in Experimental Science. Get a copy! 8 1/2 x 9 paperback 549 pages Cat. no. 532 \$39.95



GAS INTO LIQUID!

LIQUID AIR
by T. O'Conor Sloane
reprinted by Lindsay Publications Inc

This fascinating 1899 book is about the unusual machines that take the invisible air around us, cool it, and turn it into a liquid.

You'll discover interesting historical details about early thermometers, how they were built, and how they worked. You'll review the lives, work, and methods of early investigators including Faraday, Natterer, Colladon, Pictet, Cailletet, Olszewski, Dear, Tripler, and of course, Linde. Explore the Joule-Thomson effect, and examine Hampson's apparatus. You'll try your hand at liquid air experiments, and in the last chapter see what 1899 experimenters thought the applications of liquid air should be.

This is not really a how-to cookbook for machines. It is a 17 chapter exploration of early investigators' ideas and their methods. An avid experimenter will find a wealth of detailed data to digest. The important machines and details about them are here in text and diagrams. You will find more enjoyable and useful information on liquid air in this single book than anywhere else that I know of. It might just provide the missing link you need to begin experimenting with very low temperatures.

An unusual book on an unusual topic. High quality. Fascinating topic. Definitely worth having. Get a copy for your reference library. You'll like it. 5 1/2 x 8 1/2 paperback 365 pages

Cat. no. 20021

\$11.95

TEMPERATURES - VERY LOW & VERY HIGH

**TEMPERATURES
VERY LOW AND VERY HIGH**

by Mark W. Zemansky

For years now my favorite college physics text has been the one by Sears & Zemansky. I discovered it in high school when I wanted to build a gas liquification machine. Now I discover Doc Zemansky has done a whole book on the concept of temperature. Neat!

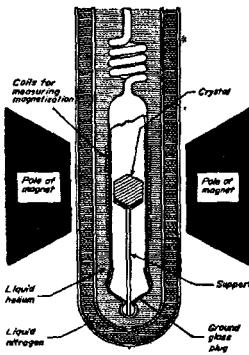
"This concise study of temperature and its extremes is designed to provide physics students, laymen and the general reader a greater understanding into the total meaning of 'temperature' as a concept....

How are extremes of temperature measured? How are such extremes of temperature produced? What is the international temperature scale? Also covered: isothermal and adiabatic processes, The Third Law of Thermodynamics, Fusion reactions, Planck's Radiation Law, Energy and entropy, Thermodynamics and negative temperature.

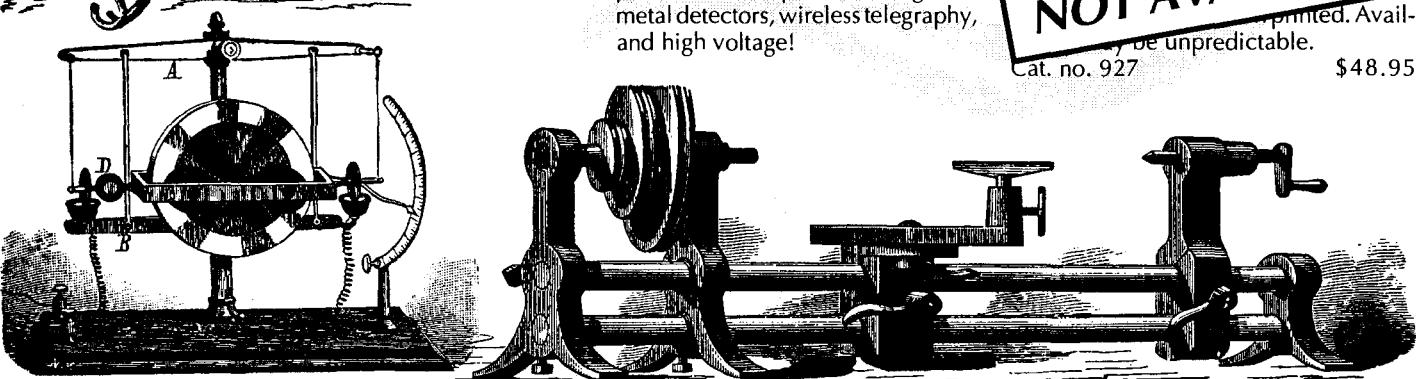
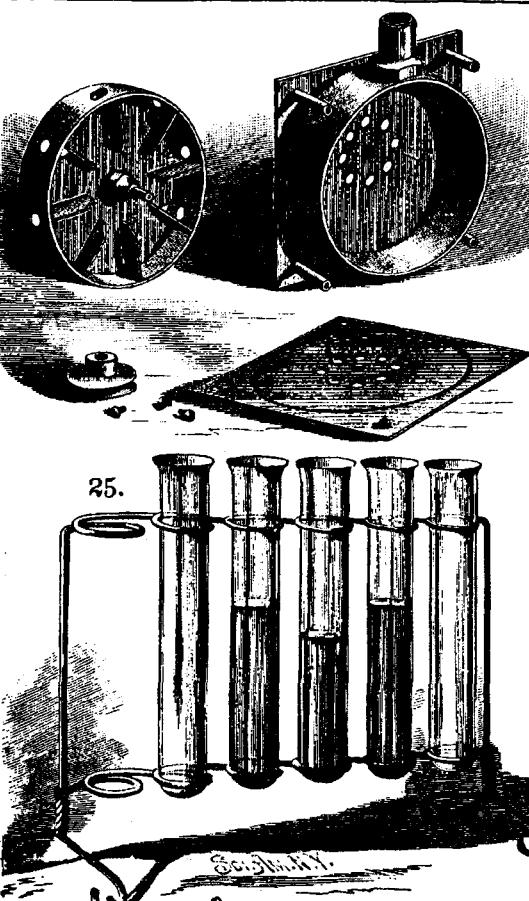
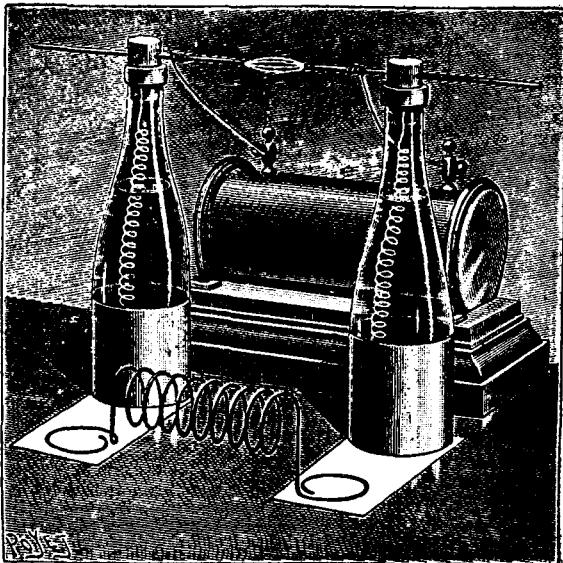
The initial chapters of this volume deal with temperature as it exists in macroscopic physics. The story behind the production and measurement of temperature near absolute zero (-450.67 F) is discussed in the succeeding chapters followed by a review of the production and measurement in the fifty million degree range. And finally, the last chapter goes beyond infinity into the realm of negative temperatures."

Think about it! Build yourself a 50,000 degree plasma torch! What couldn't you cut up with that? Learn how very low and very high temperatures are achieved. As for negative temperature, I haven't gotten to that chapter yet. Inexpensive good reading. Unusual. By someone who knows. 5 1/2 x 8 1/2 paperback 144 pages

Cat. no. 590



\$4.50



George M. Hopkins's Experimental Science

EXPERIMENTAL SCIENCE
by George M. Hopkins
reprinted by
Lindsay Publications

Fantastic! There is no other way to describe this incredibly illustrated two-volume set from 1906. It is certainly worth having.

Starting about 1889 Scientific American Magazine published a regular column by George Hopkins showing readers how they could build experimental equipment and test their own versions of new inventions such as the electric light, telephone, and phonograph. Hopkins' columns were routinely reprinted in books, and this 25th edition from 1906 had to be split into two volumes. And what a pair of volumes they are!

Build a gyroscope, Foucault's pendulum, a simple hydraulic press, a hydraulic ram, simple air pump, Geissler tube, a recorder for sound vibrations, device for production of sounding waves, a simple phonograph, centrifugal siren, and Norremberg Doubler.

You can build a simple microscope and accessories, or a simple camera with plate holder, make Daguerreotype photos like those from the 1840's (dangerous), experiment with magnets, static electricity, build all kinds of batteries, a device that converts heat directly into electricity, build bells, electromagnets, and even a 1/4 hp electric motor.

In volume Two you will explore AC electricity, arc lamps, high voltage induction coils, and much more. You will build a telephone and a magic lantern. You'll blow glass, grind lenses, make test tube racks, build and fire a crucible furnace, make carbon rods and plates, and much more. Build a simple acetylene gas generator. Experiment with liquid air, diving rods, metal detectors, wireless telegraphy, and high voltage!

Build Amazing Scientific Equipment! A 1906 Classic back in print!

You're expected to have some mechanical ability. The how-to you get is not overly detailed, but you WILL get excellent illustrations that will show you almost everything you need to know. Any additional secrets are pointed out in the text.

Build and operate scientific equipment that hasn't even been seen in decades. Unique science fair projects! You will get hours and hours of enjoyable reading. It's impossible to reveal the scope and beauty of these two books in this limited space, but take my word for it, these are fascinating books. Top quality. Expensive, but worth the price. Put them on your "must have" list...

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NOT AVAILABLE

100 RADIO HOOK UPS

100 RADIO HOOK-UPS
by Maurice L. Muhleman
reprinted by Lindsay Publications

With this inexpensive and immensely popular 1920's booklet you can go back and discover both short- and long-wave radio all over again. You get 100 different circuit diagrams using triode vacuum tubes, honeycomb coils, variometers, A.F. transformers, B batteries and all the rest. You get hook-ups for crystal sets, plain vacuum tube sets, regeneratives, the famous Reinartz, improved Reinartz and other combination sets, RF amplifier sets, Neutrodynes, reflex circuits, super-regenerative, superheterodyne, and several miscellaneous sets. This was an idea book for people who had already built a radio and wanted to try something else.

I managed to "clean" up the original so that it would reprint reasonably well. It's not as sharp and clear as I would like, but I doubt that I will ever see another copy. I like it. Small, inexpensive and worth having! Order a copy! 5x7 paperback 48 pages

Cat. no. 20641

\$3.95

222 Radio Circuit Designs

HENLEY'S 222 RADIO CIRCUIT DESIGNS
by Anderson, Mills, & Lewis

Wow! You get loads of circuits on all kinds of 1924 radio equipment. For instance, chapter six presents 25 different schematics for the basic crystal set using every conceivable type of loading and tuning arrangement.

Chapter seven launches the reader into vacuum tube detectors some with even more incredible tuning arrangements. After chapter eight on audio amplifiers comes chapter nine on miscellaneous circuits which include ultra-audio receiver, Reinartz tuner with RF, detection and audio, one-tube reflex with crystal detector, three-tube reflex with RF transformers, inverse reflex, CW receiver with BFO, three-tube neutrodyne, counter EMF circuits, Cockaday receiver, Bishop super-regenerative receiver, many others. The final section of circuit diagrams reveals designs for spark, CW, modulated CW and AM transmitters.

Relive the days of radio when circuits were simple and components were hot and heavy. Absolutely great circuit book! Great fun. Order a copy. 5 1/2 x 8 1/2 paperback 271 pages

Cat. no. 20323

\$11.95

1937 Coil Data

SHORTWAVE COIL DATA BOOK
by Radio Publications

Coils! Coils! Coils! They're the heart and soul of shortwave radio receivers and transmitters. A properly wound low-loss coil can make the difference between having an average piece of gear or a hot performer. And it seems the simpler the receiver, the more important the coils.

Here in one jam-packed booklet from 1937 are hints, tips, charts to help the shortwave radio builder design and build the best coils possible. You get informative articles from Gernsback magazines such as

- Coil Data for TRF Receivers
- The One Tube Oscillodyne Coils
- The Mono-Coil
- 2 Winding Coils for 10-500 Meters
- Coils for a 3 Tube Band Spreader
- and many others

You also get nine different circuit diagrams for the "Most Popular SW Tuning Circuits" and five "Transmitting Circuits employing the coils described".

This is highly specialized information on just one important topic essential to successful radio construction. It's only 16 pages but it's quite inexpensive and delivers. Get a copy! 8 1/2 x 11 booklet 16 pages

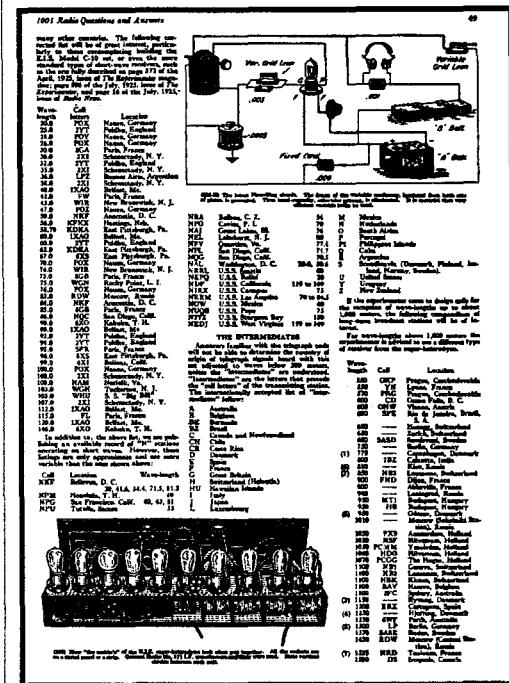
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\$1.95

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1001 RADIO QUESTIONS AND ANSWERS - 1926
edited by Leon L. Adelman
reprinted by Lindsay Publications

In 1926 the best questions to the editors of Radio News Magazine and their answers were complied into this enjoyable book. Chapters include: miscellaneous circuits, popular circuits, tube data, transmitting circuits, current supply, amplifiers, antennae, and miscellaneous apparatus.



1001 Radio

Questions & Answers

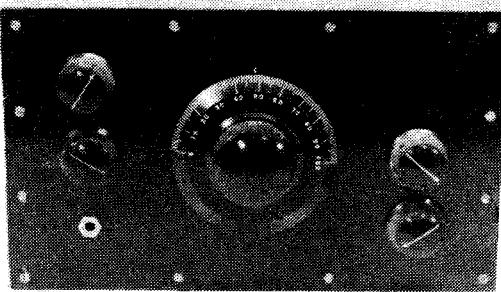
You'll see circuits for adding RF stages to regenerative receivers, circuits to sharpen tuning, a 5-tube 2-dial TRF set, circuits for cascaded regeneration, and dozens of other ideas. You get discussions concerning the use of Litzendraht wire for coil winding, new fangled superheterodynes, wave-trap design, and the Universal Plio-6 receiver capable of handling everything from 35 to 3,500 meter wavelengths. And there's so much more.

You get page after page of radio diagrams, most of them related to receiving. And this is unusual stuff – the nitty-gritty details that you generally don't find in how-to books because they're so specific. Yet, these details often contain hints, tips, and secrets the old-timers acquired by experience and then took with them to their graves.

Fascinating! Easy-to-read! The original is on cheap disintegrating paper. A couple of pages actually have small holes (imagination will be required during reading). Get one for your reference library. Order a copy today! 8 1/2 x 11 paperback 96 pages

Cat. no. 21001

\$8.95



Build Solid-State Regenerative Receivers!

Dear Mr. Lindsay:

A good friend of mine has sent me a copy of your re-done Short Wave Radio Manual of 1934, the year, incidentally, that I first received my amateur license. So it takes me back most pleasantly to the days of my youth. That I have enjoyed perusing it very much goes without saying, I believe.

It was also pleasant to read your commentary upon building regenerative receivers at the back of the book. We agree perfectly upon the effectiveness of these devices. Indeed, it was the inception of this that first made practical, long-distance radio possible. A good, properly used regenerative detector may develop a gain of 30 decibels or more, equal to that of three non-regenerative cascaded stages.

But, as you know, one always gets only what one pays for. Buy a fancy, store bought receiver and you pay for results with money. Build a "homebrew" regenerative job, and you pay for it in the effort of building and operating it with patience and care, two words that most people scarcely know any more...

It has been my experience that the good old vacuum tube still makes the most effective regenerative detector, particularly the RF pentode. Next best, in the solid state line is the junction FET, as you suggest. But it takes two of these to do the job of one good pentode tube. However, all the FETs need is a nine-volt battery, no power supply required, a real advantage as you say.

Through the years I've found that the "Throttle Capacitor" mode of regeneration control, along with a properly adjusted tickler coil (as upon page 56, 58, 62, 66 and 259 of your book) is by all odds the smoothest and most effective regeneration control method. For pentode tubes, of course, a pot in the screen circuit is ok, too. But, in general, the capacitor is my favorite - never critical, noisy or "jumpy", I've found. I've also found that when a tube is used, the higher the gridleak resistor the better (my best job used a 20 megohm leak). But for FETs, one megohm seems about right. (Too low and the sensitivity is down. Too high and the thing gets "fussy.") I would disagree, but not argue with, your theory of audio feedback through the power-source. I would feel that the inductive reactive effect of the audio transformer, or choke is the culprit. Pure resistance coupling does not develop "fringe howl," for instance. Also I find that with most FETs, a 1000 ohm source resistor is better than the 2700 ohm one that you suggest in the diagram at the top of page 247.

Building and using regenerative receivers continues to be a pleasurable experience for me. I have tried to get some young fellows of my acquaintance into this sort of activity with negligible success; they'd rather spend daddy's money upon fancy, store-bought gear. They do not realize how much honest education and real, challenging adventure they're depriving themselves of by that attitude. Too bad...

You are doing your part to keep the great self-education process alive and well. Keep it up!

C. F. "Rock" Rockey
Box 171
Albany WI 53502

Official 1934 SHORTWAVE RADIO MANUAL

Incredible How-To, Reference, and a special new chapter on solid-state sets!

**OFFICIAL 1934
SHORTWAVE RADIO MANUAL**
edited by Hugo Gernsback
& H W Secor
new chapter by T. J. Lindsay

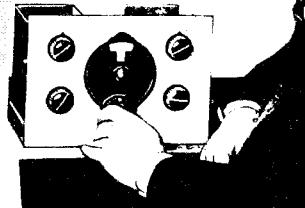
Build simple, high-performance old timeA shortwaver radios! You can. All of the secrets are here: the circuit diagrams, parts layout, coil specifications, construction details, operation hints, and much more.

Back in the 20's and 30's the only low-cost way of listening in on the newly discovered and fascinating shortwave radio frequencies was to build a set. Shortwave construction magazines flourished, even during the depression.

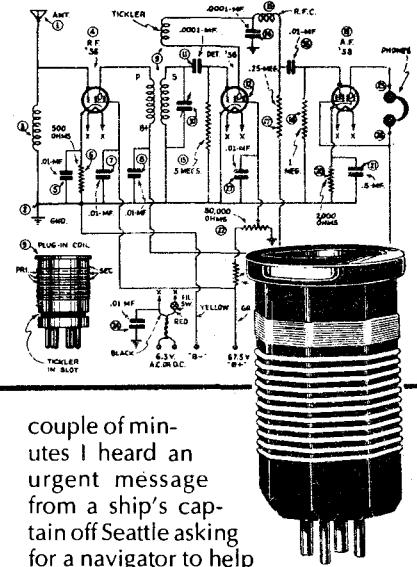
This is a compilation of construction articles from "Short Wave Craft" magazine. It's wall-to-wall how-to.

SECRETS OF OLD SETS! At the rear of the book are circuit diagrams, photographs, and design secrets of all shortwave receivers being manufactured in 1934 including some of the most famous: SW-58, the SW-5 "Thrill Box", the deForest KR-1, the Hammarlund "Comet Pro", and many more.

BUILD SOLID-STATE SETS! You'll find that all the circuits use tubes since transistors hadn't yet been invented. And you'll also find that the original tubes listed are usually difficult to find today. Included is a new chapter showing how you can use transistors to replace hard-to-find vacuum tubes. You'll even see the circuit that was lashed together on a table top one night using junk box parts, one of my wife's hair curlers and alligator clips. When I hooked it up to an antenna strung across the basement ceiling and attached a 9 volt battery, signals started popping in like crazy. In a



**THE NATIONAL COMPANY
3 TUBE S.W. SET**



couple of minutes I heard an urgent message from a ship's captain off Seattle asking for a navigator to help him through shallow water. Not bad, considering I live near Chicago!

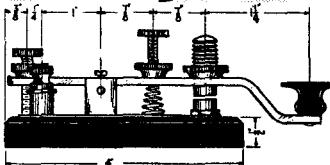
HOT PERFORMERS! These small regenerative receivers are extremely simple, but do they ever perform! I've built dozens of them, and they never fail to amaze me! Even master machinist, Dave Gingery has built these sets.

This is the nuts for the experimenter, the survivalist who is concerned about basic communication, shortwave listeners, ham radio operators who collect old receivers, and just about anyone interested in old-time radio.

Great book. Best old-time radio book I've ever seen. And I look at every one I can get my hands on. Consider it carefully. Even if you never build one of these radios, you'll get hours of enjoyable reading out of this book. Top rate. Order a copy.
8 1/2 x 11 paperback 260 pages
Cat. no. 4643 \$15.95

\$14.95

Wireless Experimenter's Manual



**Hottest "New" Technology of 1920 -
Xtal Sets, Regens, Spark Gaps, More!**

WIRELESS EXPERIMENTER'S MANUAL

by Elmer E. Bucher

reprinted by Lindsay Publications

In 1920 amateur radio was hot! It was the cutting edge of technology! Everyone wanted in on it, and Bucher showed readers

how to build equipment and operate it. You can relive those days!

You get chapters on advice to the amateur, formation of a radio club, principles of the radio transmitter, construction of transmitters, construction of aerials and masts, tuners and detectors, vacuum tube detector and amplifier, undamped wave receivers, undamped wave transmitters, cabinet

receivers and accessories, design of wavemeters, closed coil aerials,

Weagant static eliminator, and long distance relays by radio.

You get everything from early spark gap transmitters which were related to Tesla coils to continuous wave transmitters and radio telephone transmitters. You get great construction how-to on winding power transformers, coil winding machines, oscillation transformers, high-voltage condensers, rotary spark gaps, making a key, building receivers with variometers, and homemade crystal detectors.

But this is also extremely "modern" (for 1920). You'll learn about vacuum tubes and their use as replacements for crystals and as amplifiers. You'll even get one

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Great book! Fun reading. Incredibly good if you want to build

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5 1/2 x 8 1/2 paperback 350 pages

Cat. no. 20854

\$13.95



In 1922 You Could Get Radio Parts from Sears & Roebuck!

ELECTRICAL GOODS AND RADIO APPARATUS - 1922

by Sears Roebuck and Co.

reprinted by Lindsay Publications

In 1922 the place to get your components was none other than this specialized Sears Roebuck catalog. For radio freaks, this was the other "Wish Book".

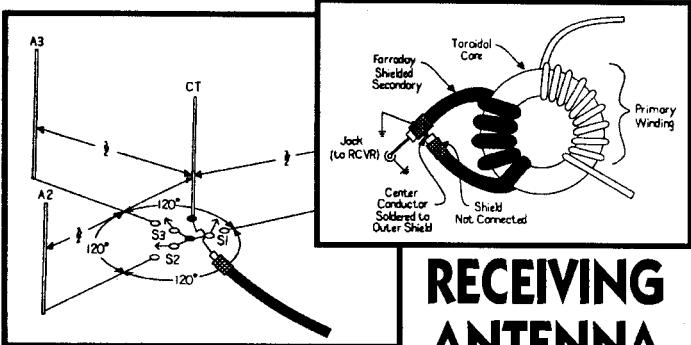
In the first 16 pages you can choose from practical appliances such as powerful electric vacuum cleaners, medical "batteries", fans, toasters, and even electric wringer washers.

But the last 44 pages offering radio equipment that will really fire you up. You can imagine yourself ordering Navy telegraph keys, galena detectors, heavy-duty spark gaps, spark coils, radiation ammeters, UV-200 (and other) vacuum tubes, variable condensers, earphones, 10,000 volt transformers, rotary spark

gaps, variometers, Bakelite panels, and everything you could want to build that dream radio station. It's great!

Now don't be a dipstick by walking in to your local Sears store and trying to order this stuff. They'll have you put away. This catalog is for pure enjoyment — for imaging what the early exciting days of shortwave radio must have been like. You get wall-to-wall illustrations — mostly photographs. I

If you like old radio, you'll like this. It's obviously easy to read. It's perfect for those evenings when I kick my brain back to idle and vegetate. Fun reading. Get a copy. You'll like it, too. 8 1/2 x 11 paperback 60 pages Cat. no. 20994 \$7.95



RECEIVING ANTENNA HANDBOOK

by Joe Carr

Radio amateurs are always interested in antennas. Many go to extreme in their quest for the perfect antenna. On the other hand, shortwave listeners seem to be more interested in the receiver. But they should probably pay more attention to the antenna.

Here's a great book that covers receiving antennas from basics to the unusual. It's well illustrated and easy-to-read, and will give you plenty of new ideas to try.

Chapters include preliminaries, real-world antennas, antenna and lightning protection grounds, transmission lines, some quick and dirty antennas, the dipole and its relatives, longwire antennas, other wire antennas, vertical antennas, directional antennas, small loop receiving antennas, low frequency antennas, and odds and ends.

Within the chapters you'll learn about stealth antennas for

RECEIVING ANTENNA HANDBOOK

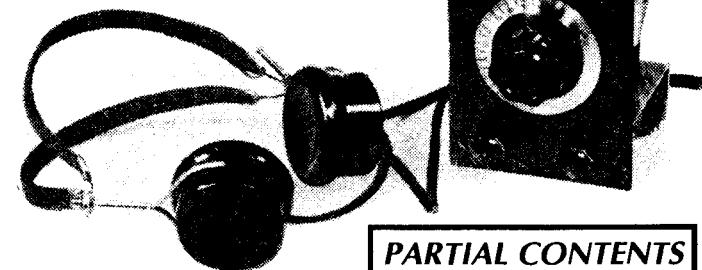
apartment dwellers, helically wound antennas, discones, counterpoise grounds for verticals, a ferriloop antenna, parasitic beams, the Thorne array, longwire termination resistors, steerable notch Beverage antennas, rhombics, trap dipoles and on and on.

You get loads of practical information from construction formulas and directional plots, to schematics for RF amps, electrical equivalent diagrams and construction details. The book is on the expensive side but delivers more useful receiving antenna information than I've seen in a single book in a long time.

Get a copy of this. You "ain't gonna hear nothing" from your million dollar receiver unless you give it signals from a top-rate antenna. Get hot. Build a good antenna. Order a copy. 8 1/2 x 11 paperback 189 pages

Cat. no. 399 \$19.95

RADIO FOR THE MILLIONS



PARTIAL CONTENTS

One-Control Beginner's Radio; Get Started in Radio; Three-Tube TRF Receiver; One-Tube Loudspeaker Set; Four-Tube Speaker Receiver; Four Dollars Builds This Set; More Power for Your Two-Tube Radio; Homemade "Audio" Telegraph; Three-Tube Phonograph Receiver; Four-Tube TRF Receiver; Two-Tube Set Gets Foreign Stations; Two-Way Radio Station; Build an FM Receiver for \$22; A Tuner for Any Broadcast Set; World's Smallest PA Units; Floor-Lamp Radio; Practice Code Sender and Receiver; Pocket Receiver for Sports; Tiny Portable Operates Anywhere; Low-Cost Power Supply; Three-Tube Superhet; Compact All-Wave Set; Two-Tube AC-DC Receiver; Portable Radio-Phonograph; One-Tube Shortwave Set; All-Wave Bands on Two Tubes; Europe on One Tube; Bicycle Radio; "B" Supply for Portables; Priority Receiver Uses New Tuning; Compact Rectifier Unit; Midget Broadcast Set; Week-ender's Radio; Midget AC-DC Receiver; Book-End Radio for Your Den; One-Tube All-Electric Set; Superhet for Beginners; Pocket-Size Radio Tester; "Wireless" Radio Phonograph; Low-Cost Home Recorder; Tom Thumb Radio; Suitcase Phonograph; Two-Tube Portable; and much more!

RADIO FOR THE MILLIONS

by Popular Science Monthly
reprinted by Lindsay Publications

From the pages of World War II vintage issues of Popular Science Magazine came this reprint of well illustrated electronics articles on everything from phonographs and shortwave radios to cabinet design and radio servicing.

This is another of those jam-packed project books that are so much fun to read. By careful scrounging and trading you can still get many of the parts and relive the early days of electronics before transistors and integrated circuits.

Every one of the dozens of articles is illustrated with sharp photographs, schematic diagrams, and parts lists. Some of it seems really primitive and amusing. Other projects almost demand that they be built!

Great stuff from the days before miniature vacuum tubes. Endless enjoyable reading, especially if you remember reading this stuff as a kid. Get a copy of this. You'll really like it. 6x9 paperback 192 pages

Cat. no. 20196 \$8.95

Old Radio Parts

Looking for old tubes?

How about 6SN7 double-triodes? They make great flip-flops if you want to build a vacuum-tube computer. You don't? Yah, I guess a couple of million of them might be a bit expensive...

Maybe you need a 53 so you can build a set from the 1934 Shortwave Manual. Or a 27 so you can builder a receiver from the Radio Builder's Manual. They've got 'em.

You can also get sockets, wirewound resistors, pots, transformers, chokes, electrolytics, and more. They have kits for

tube regenerative receivers, a tube wireless transmitter, battery eliminators for tube equipment, knobs, galena crystals for crystal sets, phonograph parts and much more. They also offer lots of Lindsay books so you know they can't be ALL bad!. I'm sure they're not the only antique radio source, but they have a good selection and fair prices. Write THEM for a catalog.

Antique Electronic Supply
6221 S Maple Ave
Tempe AZ 85283
Tell them Lindsay sent you.

Oudin Coil Plans

PLANS & INSTRUCTIONS TO BUILD THE HIGH FREQUENCY ELECTRIC COIL
by John F. Nuyen

This is actually a Oudin coil (very similar to the Tesla coil) that like the coil above is driven by a Model-T hum coil and an 8 gauge primary. The secondary is wound with 34 gauge magnet wire around paper tubes.

You'll find this is brief, typewritten, and not "slick" in appearance, but is written by someone who has done it. If you're into Tesla coils, you should have this. Order a copy. 5 1/2 x 8 1/2 booklet 16 pages

Cat. no. 375 \$4.00

Become a Radio Operator!

EDDY'S RADIO OPERATOR
by Lt Myron F. Eddy
reprinted by Lindsay Publications Inc

Some of this is history, and some is radio theory but with vacuum tubes not transistors. Some is construction of radio receivers such as the 3 tube bandspread, the super heterodyne, and others. You'll even get a look into the secrets of the Hammarlund "Comet Pro".

You'll learn about code and phone transmitters including construction of a breadboard push-pull code transmitter and an early crystal controlled phone transmitter with amplifier stage. The power supply, modulators and other pieces fit into an impressive homemade wooden rack mount transmitter guaranteed to impress (or scare) your 1934 neighbors!

In the back are a few ads including



one for the famous National SW-3 regenerative receiver, the Kolster Model K-5 amplifier, and National's BM 3" midget Velvet-Vernier dial.

This is fun reading and great info on early receivers and transmitters. You might not want to put the transmitters on the air, but the receivers would be fun to build, and learning the code is still very valuable. Order a copy! 7 1/2 x 9 1/2 paperback 72 pages

Cat. no. 20730

\$5.95

THE WIRELESS MAN - HIS WORK AND ADVENTURES ON LAND AND SEA
by Francis A. Collins
reprinted by Lindsay Publications

"Send out the call for assistance," said the captain [of the Titanic].

"Which call, Captain?" Phillips asked.

"The regulation international call for help." And the captain hurried away.

The C.Q.D. was instantly flashed out with the entire force of the apparatus, which was the most powerful then afloat. This continued for five minutes without receiving an answering call, when the captain again appeared in the doorway.

"What are you sending?" he asked.

"C.Q.D.," Phillips replied, suiting the action to the words.

Send the S.O.S.!



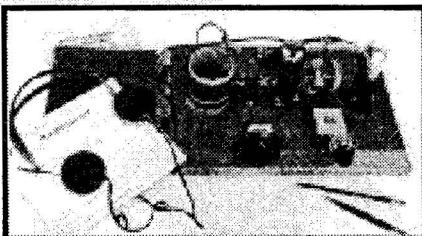
Become a Radio Amateur

Build a 1930 Ham Radio Station!

HOW TO BECOME A RADIO AMATEUR
by the ARRL
reprinted by Lindsay Publications

Discover the 1930 amateur bands as they then existed, how to learn Morse code, how to build a two-tube (UV-201-A) bread board regenerative receiver for the 80 meter band, an oscillating transmitter using a UX-210 tube, an AC power supply, tips on setting up the radio station, and finally how to operate it. Great nostalgia. Discover early ham radio. Build early equipment. Lots of fun reading. Low cost. Get a copy. 8 1/2 x 11 booklet —32 pages

Cat. no. 20226



\$2.95

Rare Booklet! Build 1923 Loudspeakers!

LOUD TALKERS - HOW TO BUILD THEM
by H. Winfield Secor
reprinted by Lindsay Publications

You probably wouldn't have been able to afford a loud talker (loud speaker) back in '23. You would have had to build one. Actually this is a book about winding the electromagnetic that vibrates a diaphragm violently enough to hear it across the room when amplified with an old-fashioned horn. Sections are entitled loud-talker field frame, the diaphragm and moving coil, data on loud-talkers

actually built, details of step-down transformer, connection to vacuum-tube amplifier set, power amplifier circuit, bi-polar loudtalker made from odd parts, building the electromagnet, and more. Unfortunately, there is nothing of significance on the horn.

It's just a little booklet. The original is brittle and yellow, having been printed on the cheapest paper. It's interesting. Rarely will you find anything on speakers. Worth adding to your radio collection. Order a copy! 5x7 booklet 48 pages

Cat. no. 20803

\$3.50

THE WIRELESS MAN - HIS WORK AND ADVENTURES ON LAND AND SEA
by Francis A. Collins
reprinted by Lindsay Publications

"Send out the call for assistance," said the captain [of the Titanic].

"Which call, Captain?" Phillips asked.

"The regulation international call for help." And the captain hurried away.

The C.Q.D. was instantly flashed out with the entire force of the apparatus, which was the most powerful then afloat. This continued for five minutes without receiving an answering call, when the captain again appeared in the doorway.

"What are you sending?" he asked.

"C.Q.D.," Phillips replied, suiting the action to the words.

Be A Wireless Man!

"Send the S.O.S., said the captain...

You can travel back to 1912 and get a first hand tour of the new wireless radio stations that were relaying Morse code signals everywhere. This was a part of "Every Boy's Library" and was the Boy Scout Edition. That means this book is fast, interesting reading with plenty of fascinating illustrations.

You can be the wireless boy, stand in the wireless room aboard ship and watch the operator test his equipment prior to sailing from the pier in New York. You can look through the log and listen in on the coded signals that the wireless operators used.

Chapters include Across the Atlantic, The Wireless Boy, How It Works, Talking Across the Atlantic, Some Stirring Wireless Rescues, Novel Uses of Wireless, Wireless in the Army, Wireless in the Navy, The Wireless Detective, and Three Heroes of the Wireless [includes the recent Titanic sinking].

Other books can tell you how to build a spark-gap radio station and even how to use it. Here you're in the middle of the exciting action as skilled operators put the apparatus to work. This is written to excite boys into exploring the new world of radio, and it will excite you, too.

Get a copy of this. Great, enjoyable reading. Just plain fun. Excellent illustrations. Unusual and worth having. Order one! 5x7 paperback 251 pages

Cat. no. 21125



Above: Interior of a modern wireless station Left: Woman wireless operator on shipboard

\$11.95

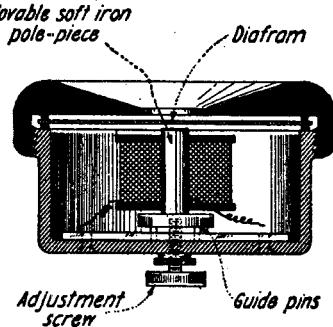


**THE HOW AND WHY OF
RADIO APPARATUS**
by H. W. Secor, E.E.
reprinted by Lindsay Publications

Back in 1922 when short-waves were the newest high tech frontier being explored, everybody and his brother was wanting to build a shortwave set and tune in on the fun. Magazines and books could tell you how to bolt together a set but rarely told you anything about why or how it worked. If you wanted to modify it or improve it, you would probably use a trial-and-error engineering approach. And that usually doesn't work very well.

Secor set out to explain to his readers how components worked individually and together, and without using heavy math to do so. This book provided the "practical theory" experimenters needed.

Chapters include: The Induction Coil, The Transformer, Radio Transmitting Condensers,

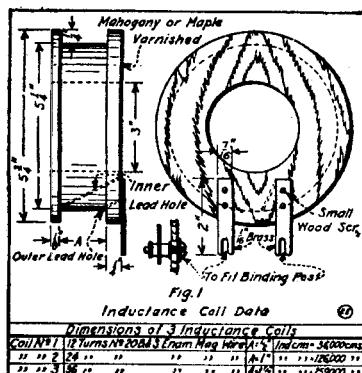
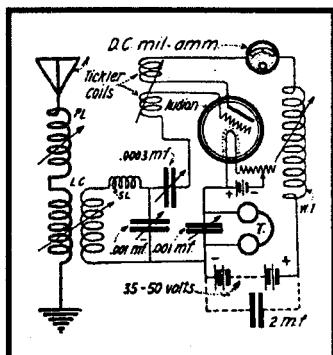


The How and Why of Radio Apparatus

Spark Gaps, Radio Transmitting Inductances, Radio Receiving Tuners, Radio Receiving Condensers, Detectors, Telephone Receivers, Radio Amplifiers, How to Make and Use a Direct-Reading Wave Meter and Decrometer, Radio Antenna Construction, The Calculation and Measurement of Inductance.

This is great stuff for experimenters old and new. You won't find much in modern books on spark gaps and variometers. A lot of this is quaint reading. You may not want to duplicate the circuits, but you can in your imagination. Building the direct reading wave meter could be fun. And the calculation and measurement of inductance is interesting, too. Tesla coil builders might benefit from some of this info, since a Tesla coil is a primitive radio transmitter.

This is an unusual early radio book that complements the books that are little more than circuit diagrams. Here, you'll "crawl" inside the head of the old-time builders and learn how they saw the new field of electronics opening up. I like it. I think you will, too. Get a copy! 6x9 paperback 160 pages Cat. no. 21133 \$8.95



RADIO BUILDER'S

Plugs Into LIGHT SOCKET

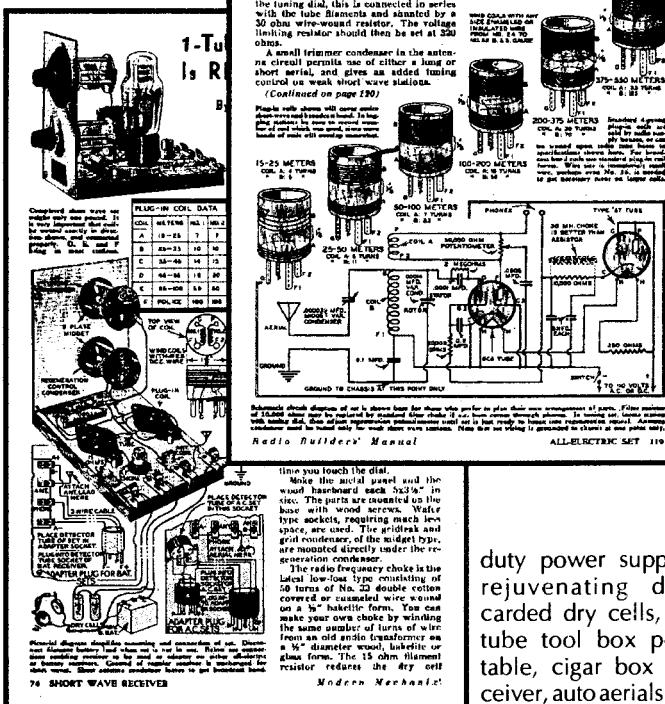
The new 8GD tube used in this set actually does the work of three ordinary radio tubes, picking up the radio frequency signals, detecting them, and then driving the audio frequencies for the headphones.

Naturally, regeneration is used to make the set as sensitive and selective as possible. A positive feedback signal across the tickler winding of the plugin coil serves as regeneration control.

The 8GD Universal A.C.-D.C. circuit permits this set to be used interchangeably on alternating or direct currents. The filament voltage is supplied through a series with a 350 ohm voltage limiting resistor. In case a pilot light is desired for the operating dial, this is connected in series with the filament and controlled by a 30 ohm wire-wound resistor. The voltage limiting resistor should then be set at 300 ohms.

A small triode condenser in the antenna circuit prevents use of either a long or short aerial, and also makes possible tuning control on both short wave stations.

(Continued on page 204)



RADIO BUILDER'S MANUAL

by Modern Mechanix

reprinted by

Lindsay Publications

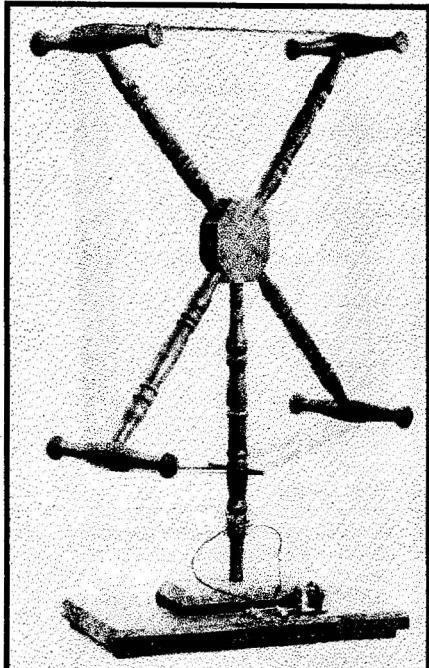
"Complete plans for all-wave receivers, amateur transmitters, police call adapters, crystal sets, automobile radio, portable receivers, as well as hundreds of other radio plans, stunts, and trouble-hunting kinks."

This 1935 paperback provided builders with a convenient collection of the best how-to articles from back issues of Modern Mechanix magazine. You get dozens and dozens of plans and odds and ends such as Wheatstone bridge for test bench, smallest broadcasting station, build selenium electric eye, 1-tube shortwave marvel, build a heavy

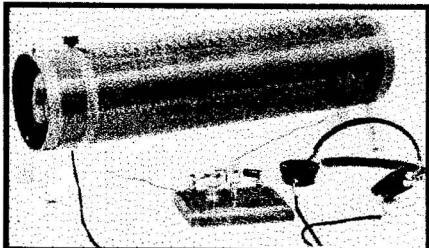
duty power supply, rejuvenating discarded dry cells, 3-tube tool box portable, cigar box receiver, auto aerials for 5-meter transceiver, smallest all-electric all-wave set, and on and on.

Sure it's all vacuum tube technology. And the police call adapters, obviously, won't receive anything anymore. But this is still fun stuff to read. The wall-to-wall illustrations will keep you occupied for hours. And if you really want to build samples of this old time gear, you'll have lots of fun doing it.

Get a copy and start digging into articles entitled "Powerful Crystal Set Brings in Distance," "This Electromagnet Does Mystifying Stunts," and "Powerful 5-Meter Radiophone Uses Broadcast Set Parts." Fun reading. Order a copy today. 7x10 paperback 130 pages Cat. no. 21168 \$9.95



CRYSTAL SETS!



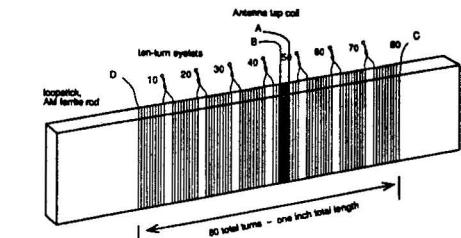
RADIOS THAT WORK FOR FREE

by K.E. Edwards

Build yourself a crystal set! You'll be shown everything you need to know - from materials to tools to techniques. Edwards will show you how to build "hot-rod" crystal sets with fancy features that can outperform the old oatmeal box versions, but are still simple. If you've never built anything electronic at any time but would like to try, this is a great place to start. This book has become a classic in its field, and it gives me a good feeling. I think you'll like it, too. 5 1/2 x 8 1/2 paperback 138 pages — well illustrated

Cat. No. 314

\$9.95



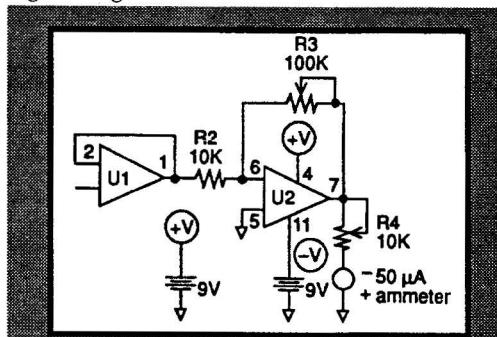
XTAL Set Society

REPRINTS FROM JULY 91 TO MAY 92

by Phil Anderson, WOXI

Radio can't get any simpler than crystal sets! Anyone can build one! But what do you do after you've wrapped an oatmeal box with wire? Here's your answer.

In July 1991 Phil Anderson from Lawrence, Kansas launched "The XTAL Set Society". You should have signed up. But you still can. And! You can find out what you missed by ordering a copy of this reprint of his newsletters for the first year. If you're into crystal sets, you'll find this interesting reading.



You get articles on building a basic field strength meter, a shortwave crystal set, "Why Did Those 1920s Crystal Sets Work Anyway?", a bare bones crystal set, an FM crystal set, a five part compression-capacitor crystal set (with part sources), a list of early articles on crystal sets, a toroidal crystal set, matching your antenna to your set for maximum signal reception, detector analysis, a 20 part crystal set, and other bits and pieces.

Yes, you'll find info on joining the society. Crystal sets are fascinating because of the challenge of getting more performance out of less hardware - a move from complexity to simplicity. That's a refreshing change! I think you'll find this quite interesting. Get a copy! 8 1/2 x 11 plastic spiral binding about 36 pages

Cat. no. 395

\$10.95

More! Vol. 2!

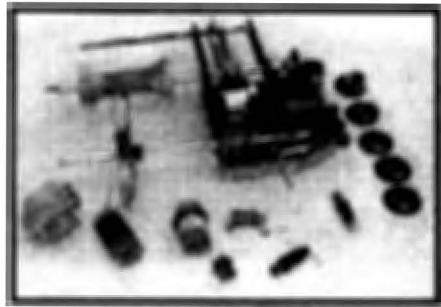
XTAL SET SOCIETY VOL 2

by Phil Anderson WOXI

More interesting articles from July 92 to May 93 newsletters. Articles include: lead pencil detector, minimum detectable signal, detector biasing for improved sensitivity, double tuned circuits, universal crystal set, FM crystal sets, the electrolytic detector, the coherer revisited, Miller '595' Tuner revisited, and a galena detector from Italy, and more. Good reading. 8 1/2 x 11 plastic spiral binding 39 pages

Cat. no. 3003

\$10.95

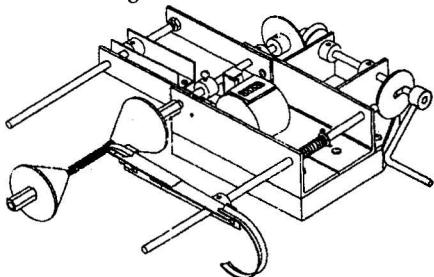


BUILD A UNIVERSAL COIL WINDING MACHINE

BUILD A UNIVERSAL COIL WINDING MACHINE

by David J. Gingery

Just a few years ago, experimenters could buy two or three simple hand-operated affordable coil winders. I haven't seen any of them advertised lately. You certainly can wind coils by hand, but if you're going to do any serious experimenting with old-time shortwave circuits, a coil winder is worth having.



Dave will show you how to build a coil winder from common, easily-obtained materials. Although it may look complex, it really is not. You'll find that it is easy to build. You don't need to be a mechanical genius, or need expensive tools. Yet this amazing little machine will professionally wind universal and honey-comb coils, single-layer and multi-layer solenoids, close-wound and space wound coils, and even pi-spaced coils such as used for RF chokes and transformers.

This is a typical Gingery how-to book—loaded with illustrations, dimensions, and step-by-step text that is so detailed it almost holds your hand! Excellent publication. A serious experimenter should have a copy of this and the winder it describes. Order a copy. It's excellent. 8 1/2 x 11 booklet 24 pages

Cat. no. 386

\$8.95

How to Build Your Radio Receiver

From 1924!
Construction articles
from POPULAR RADIO!



POPULAR RADIO HANDBOOK NO. 1 - How to Build Your Radio Receiver

edited by Banning & Cockaday
reprinted by Lindsay Publications

Today we talk about high tech inventions like space shuttles, computerized virtual reality, and gene-splicing. In 1924 the craze was radio. And it was fed by the amazing discovery that short waves could carry messages around the world.

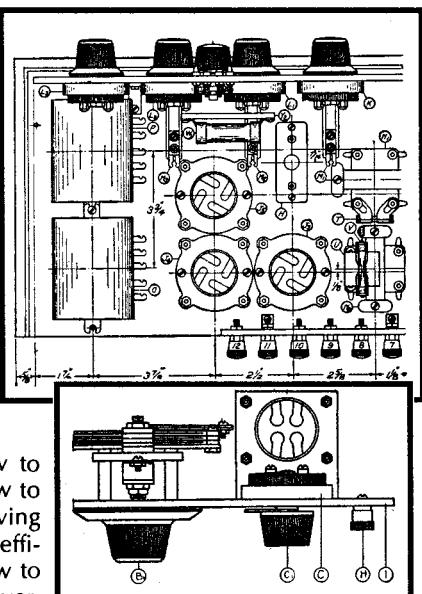
The best thing about radio back then was that just about anybody who could save enough money to buy a vacuum tube could build their own receiver and get in on the fun. (I don't know of anybody who has their own space shuttle...)

The people at Popular Radio published their magazine to cater to the exploding interest. What you get here are the best construction articles from that magazine.

Chapters include: how to read a radio diagram, how to put up an outdoor receiving antenna, how to build an efficient crystal receiver, how to build the Haynes DX receiver, how to build a two-stage audio-frequency amplifier, how to build the four-circuit tuner, how to build a tuned radio-frequency receiver, how to build the improved four-circuit tuner, how to improve the three-tube four-circuit tuner, how to build the new regenerative super-heterodyne receiver, and broadcasting sta-

tions in the U.S. of 50-watt power or more.

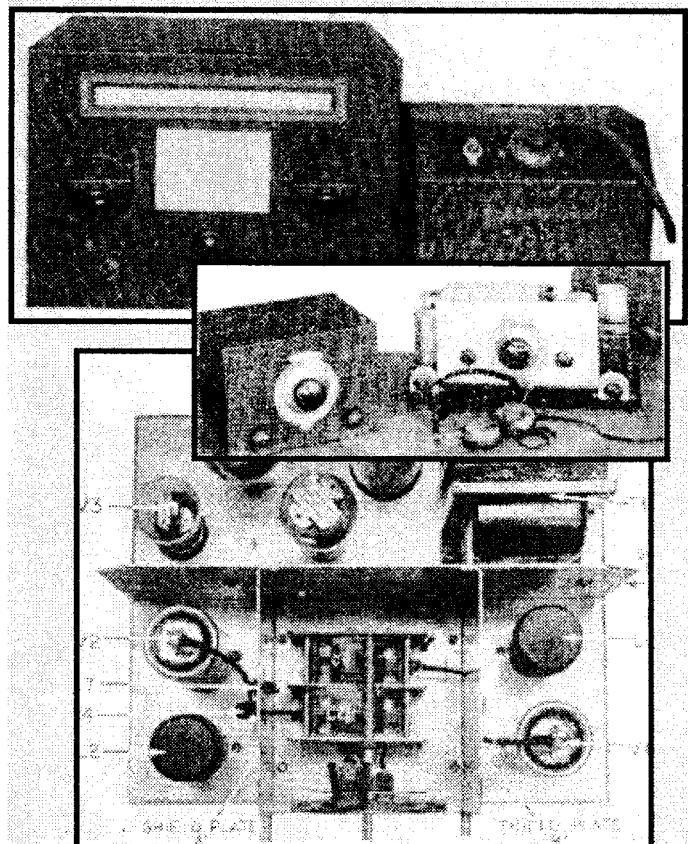
This is old time stuff with four-prong tubes, coupling controlled by moving the coils, bread-board layouts, and 45 volt "B" batteries. You get drilling layouts for the Bakelite panels, dimensions for the cabinets, wiring instructions and more. This is one of the



best early practical how-to books I've seen

If you have radios to restore, or have old parts you'd love to lash up into a working set, then this is for you. For the rest of us it's fun reading. It's technological history! Early radio at its best. Get a copy. 8 1/2 x 11 paperback 104 pages

Cat. no. 20951 \$8.95



Shortwave Handbook

Great 1933 SW Info! Build one of several sets, or buy one of the great new ones!

SHORT-WAVE HANDBOOK

edited by Cockaday & Holze
reprinted by Lindsay Publications

Times were tough in '33, but you could always have some fun building a short wave receiver and tuning into the mysterious signals that filled the air. Radio News magazine published this nifty book to get people started in radio building.

Chapters include fundamental principles, helpful short wave data, how to make five simple short wave receivers, two advance short wave designs, popular commercially built SW apparatus, getting the most out of the short waves, short wave stations lists, short wave DX & reception reports, learning the code, amateur transmitters, and ultra short waves.

Once you're through some of the basic theory of short wave communication, you'll build a basic two tube regenerative receiver, a hot three tube job with RF stage, one of those amazing receivers you can plug right into

the wall outlet!, a TRF with a regenerative detector and more.

You'll get introduced to the intricacies of the Lincoln R-9 receiver, the American Bosch Model 260 "Super", the Scott deluxe all-wave super, the Hammarlund Comet "Pro", the Midwest sixteen tube super, the incredible National FB-7 receiver and more.

You'll get frequencies and times for listening to PLE from Bandoeng, Java and YO1 from Bucharest. You'll learn the code, get your amateur license and even build a crystal-controlled transmitter!

This is a much better than average short wave book because it delivers details on building your own receivers as well as on commercially available sets. Worth considering carefully, especially if you like to tinker with regeneratives. Get a copy. I think you'll like it. 5 1/2 x 8 1/2 paperback 136 pages

Cat. no. 21176 \$9.95

PRIMARY BATTERIES

by Henry S. Carhart

reprinted by

Lindsay Publications

Here's a great little book that covers the characteristics, construction, performance, maintenance, and measurements of primary batteries — devices that turn chemicals into electricity. What you get is what I call "practical theory" — knowledge that will help you understand turn-of-



The chapters are actually broken into 118 sections such as experiments on the polarization of a simple cell, defects of the Daniell cell, the bichromate battery, the copper-oxide battery, the closed Leclanche cell, the Smee cell, the Law battery, the Gassnerdry battery, Lord Rayleigh's form of the Clark element, Minchin's seleno-aluminum cell, Jablockhoff's battery, test of a silver chloride cell, grouping dis-

Rediscover Forgotten Secrets of PRIMARY BATTERIES

the-century batteries that few people have ever seen and get the most from them. You don't construction how-to.

Chapters include introduction, simple voltaic cell, potential and electromotive force, closed circuit batteries, open circuit batteries, batteries without a depolarizer, standards of electromotive force, miscellaneous batteries, battery tests, grouping of cells, and thermal relations.



similar cells, application of the Bunsen cell, and much more.

This hard-to-find information is essential for understanding how unusual, early batteries, now long forgotten, work.

Great reference! Great illustrations! Impress your friends when you fire up your homemade regenerative receiver on a homemade battery! They'll think you're Tesla himself! Worth having. Order a copy! 5x7 paperback 208 pages

Cat. no. 20536 \$8.95

GLASS WORKING

GLASS WORKING

BY HEAT AND BY ABRASION

edited by Paul N. Hasluck

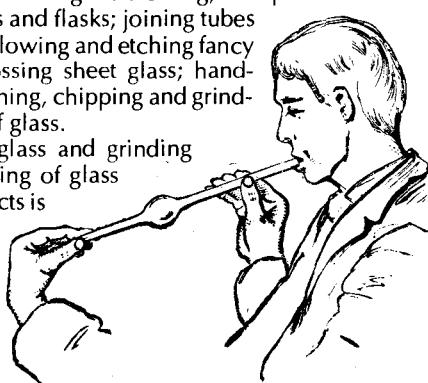
reprinted by Lindsay Publications

You can learn to work glass like an expert by studying this collection of articles reprinted in 1903 from the pages of "Work" magazine. You'll learn not only how to make laboratory apparatus, but how to grind telescope mirrors and lenses.

Chapters include: appliances used in glass blowing; manipulating glass tubing; blowing bulbs and flasks; joining tubes to bulbs; making thistle funnels; blowing and etching fancy glass articles; gilding and embossing sheet glass; hand-working of telescope specula, turning, chipping and grinding glass; and the manufacture of glass.

The information on making glass and grinding lenses is too brief, but the working of glass tubing into useful laboratory objects is detailed and well illustrated.

I'm sure this is not the greatest book on working glass I've ever seen, but it is the best I've seen so far and is well-illustrated. Get a copy. 4x7 paperback 160 pages Cat. no. 20250 \$8.50



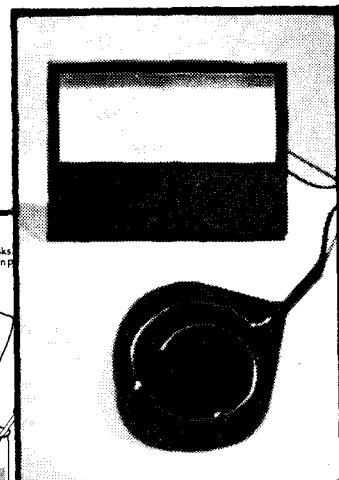
Build a Solar Cell that really works!

HOW TO BUILD A SOLAR CELL THAT REALLY WORKS

by Walt Noon

Yes! You CAN build a solar cell that converts sunshine into electricity. And it's really quite easy.

Modern high efficiency solar cells based on silicon crystals are difficult and dangerous to manufacture. You would need exceptionally expensive equipment just to perform the



fingers available for less than \$2.00 in camera shops to disks feet across. In direct sunlight one of these large disks can produce enough heat to cook a meal or solder metal!

A Painted Cell

One of the most amazing and interesting aspects of simple experimental solar cells is a cell made by actually painting cuprous oxide onto a metal surface. Cuprous oxide may be purchased inexpensively in powdered form from many chemical supply houses including those mentioned in the book. When mixed with a clear resin and painted thinly on a metal surface it will take on many of the properties of a cell made by the heating process described earlier.

So far the cells I've produced using this method have generated only very small amounts of power. Perhaps better would be to make this the fastest, lowest cost cell to fabricate. What would be lost in efficiency could be made up in greater surface area.

Final Notes and a Simple Cell

I don't know if the construction of a photoelectric cell such as those described in this article is worthwhile versus purchasing commercial cells when you take into consideration their low efficiency and the time it takes to fabricate them. But I do know

17

close to modern silicon cells, but neither does the cost. You can crank out cells for pennies. Connect many cells in parallel and series, and you can generate surprising amounts of power.

The process requires only simple tools. The chemicals, like all chemicals, can be dangerous if mishandled, but the worst is probably nitric acid which is used to thoroughly clean the copper.

He'll show you to make a working cell, test it, troubleshoot it if necessary, and even give you ideas on an experimental painted cell that he's working on. In addition, he'll give you schematics of test circuits, sample applications, and interesting projects that he's tried. You'll also get names and addresses of suppliers.

That author is not a professional, but he has safely built and used these solar cells, and he's willing to show you how its done. You get a 24 page booklet with many drawings, schematics and photographs that describes the relatively simple process in detail.

Build solar cells! Perhaps you can make some improvement in the process that will improve efficiency. Build electronic equipment. Charge batteries. Build a great science fair project. No matter what your objective, you'll find this to be a fascinating project worth trying. Rare information! Order a copy of this inexpensive booklet today. 5 1/2 x 8 1/2 booklet 22 page Cat. no. 819 \$4.95

How to Unscramble Video!

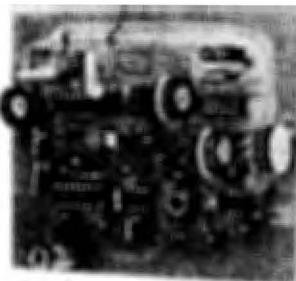
VIDEO SCRAMBLING & DESCRAMBLING FOR SATELLITE & CABLE TV

by Graf & Sheets

If you have purchased or plan to purchase a satellite dish to capture signals coming from the many Earth-orbiting satellites, this book is for you.

You get:

- An understanding of encoding/decoding systems
- The theory and techniques of video encryption and decryption
- An overview of the rules and regulations governing the availability and use of satellite signals, antennas, and programming materials
- Schematics and details for several encoder and decoder projects.



Originally published in 1987, this book provides detailed information on everything from simple cable encryption systems to commercial satellite systems such as Videocipher II™, the B-Mac System, and even the Data Encryption standard.

Although the authors are quick to point out that the information is not to be misused in theft of signal, they have provided a wealth of schematics, printed circuit board layouts, IC chip specs, patent reprints, list of satellites and the scrambling systems they use and much more. This is a quality master reference that any video/satellite fanatic will find useful. Order a copy today! 8 1/2 x 11 paperback 246 pages

Cat. no. 370 \$24.95

Very Rare Glimpse into Earliest TV Systems

VISION BY RADIO RADIO PHOTOGRAPHS RADIO PHOTOGRAMS

by C. Francis Jenkins

Go back to 1925 and discover the earliest fax machines and televisions! This is an amazing book! You get details on the electrical components that existed at the time, the tests that had been tried, correspondence from famous people, and historical notes.

The most interesting section, I think, is illustrated review of existing machines: Nipkow & Sutton, the Amstutz system, the Electrograph, the Baker machine, the Dr. Korn Machine, the Rignoux and Fournier Scheme, the Belin machine, the AT&T machine, RCA's machine, the Braun Tube re-

ceiver, pictures by radio in natural colors (!), prismatic disc machines, the Jenkins prismatic ring, Jenkins synchronizing forks, Jenkins picture-strip machine, Jenkins Duplex machine, talking machine photograms, radio vision (television), Jenkins high speed camera, and more.

Obviously, this book was written and published to glorify Jenkins Laboratories Inc., but it delivers more photos, drawings, and patents on early fax and TV equipment than I've ever seen anywhere before.

Rare! Quality! The price we ask is a mere fraction of what you'd pay for an original if you could find one. Get a copy! 5 1/2 x 8 1/2 paperback 140 pages

Cat. no. 2020 \$9.95

Classic Photocell Book by Father of Modern TV!

PHOTOCELLS AND THEIR APPLICATION

by Zworykin and Wilson
reprinted by Lindsay Publications

Here's a fascinating book! Zworykin is credited with making television practical by developing the iconoscope and the extremely sensitive image orthicon that made modern TV possible after WWII.

You get a complete education in 1934 photocell state-of-the-art. Chapters include historical introduction, radiant energy, photo-emissive effect, photosensitive films, material and apparatus for making photocells, general methods of preparing photocells, the vacuum photocells, the gas-filled photocell, photo-conductive photocells, photo-voltaic cells, photocell output and amplifying tubes, optimum outputs of photocells, the problem of amplification, special light-sensitive devices, the photocell in photometry and colorimetry, in sound movies, in facsimile, in

television, and more.

You get great illustrations from vacuum pumps, cesium-oxide cells, and amplifier schematics, to a Zworykin multiple cell, Nipkow TV system, and early FAX machine. This is easy-to-read and covers great material. There is a little math for engineers.

There is limited material on cells which produce electricity directly from sunlight such as the Rayfoto cell, the Photolytic cell, the Ruben cell, the Grondahl-Gieger cell (a copper oxide cell the plans for which are offered elsewhere in this catalog), the Sperrsicht cell, and others.

A great book presenting rare information. Not how-to. Written by a giant in the history of television. Great reference for TV and solar cell fanatics. Get a copy! 5x7 paperback 348 pages

Cat. no. 20560 \$9.95

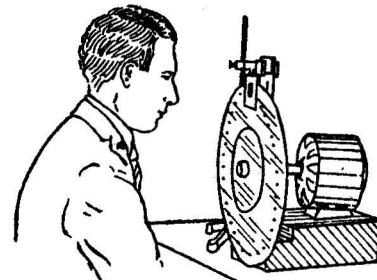
Experimental Television

"a series of simple experiments with television apparatus and also how to make a complete home television transmitter and television receiver."

EXPERIMENTAL TELEVISION

by A. Frederick Collins
reprinted by Lindsay Publications

Build yourself a television station! No, not with iconoscopes, vidicons, nor CCD's, but with Nipkow scanning disks. Go back to 1932 and let Collins show you how.



Chapters include experiments with light, with vision, with the scanning disk, with the photo-electric cell, with the amplifier tube, with glow tubes and neon lamps, with electric waves, with synchronism, with cathode rays and the oscilloscope tube, how to make a television transmitter, and how to make a television receiver. And it comes complete with 185 illustrations by author himself.

reinforce your reputation as the neighborhood mad scientist!

You'll learn how to fabricate the scanning discs, synchronize them, make a selenium cell (probably with dangerous, toxic chemicals), use synchronous motors, build vacuum tube circuits and much more. Although Collins is known for his books for boys, because of the complexity of this equipment, this book is aimed at readers of all ages.

If you're lazy (or just want top rate quality), you can buy a Camcorder. But if you want to impress your neighbors and reinforce your reputation for being the local mad scientist, build this 1932 vintage TV station. You'll hear - "How did you know how to do that?" Don't tell them you read it in a book! Make 'em think you're Tesla reincarnated.

Fascinating book. It's hard to believe that TV engineers even seriously considered mechanical scanning. Rare book. If you're lucky enough to find an original of this, it will cost you many times what I'm asking. Worth having. Order a copy today. 5 1/2 x 8 1/2 paperback 313 pages

Cat. no. 20790 \$14.95

**PERMANENT MAGNET
DESIGN & APPLICATION
HANDBOOK**

by Lester Moskowitz

Back in print! For now at least... The best magnet book I've seen.

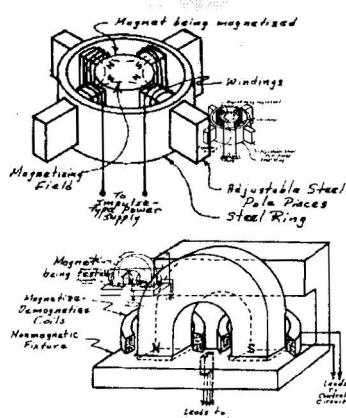
Opening this book gives you the feeling you've opened the lab notebook of a famous magnet scientist. It's loaded with drawings, diagrams, equations, notes, hints, tips, circuit diagrams and more.

Chapters include brief history of magnets, terms and definitions, classification of magnets and materials, basic manufacturing processes, fundamentals of magnetism, general design considerations, leakage and fringing, circuit effects, exact design methods, and on and on.

You get all kinds of information and making, testing and using magnets from a circuit diagram for a 100 joule impulse magnetizer to suggestions for use in magnetic drives, motors and magnetos, magnetic welding benches and much more.

Expensive! But the best

PERMANENT MAGNETS!



book of its type I've ever seen. Just the right mix of theory and practical application. Rare information. If you think you'll ever need it, get it now. It went out of print once, and is being reprinted (probably only for a short time) by another small publisher. I'm glad to see it's back. 9x12 hardcover 443 pages heavily illustrated

Cat. no. 1149 \$65.00

INTRO TO MAGNETISM

**MAGNETISM
AN INTRODUCTORY SURVEY**
by E. W. Lee

After the history of magnetism comes the good stuff.

"...We then learn the principles behind electric motors, dynamos, transformers, permanent magnets, synchrotrons, solenoids, memory banks in computers, betatrons, magnetic supercooling, and other modern applications...."

"The author shows us how magnetism 'works,' with reference to such concepts and principles as lines of force; ferromagnetism; the atomic theory of matter in relation to electromagnetic properties; paramagnetism and diamagnetism; quantitative measurement of magnetic force; domains and domain boundaries; high-permeability alloys, their theoretical basis and uses; magnetic matrices used as



information. Order a copy. 5 1/2 x 8 1/2 paperback 281 pages

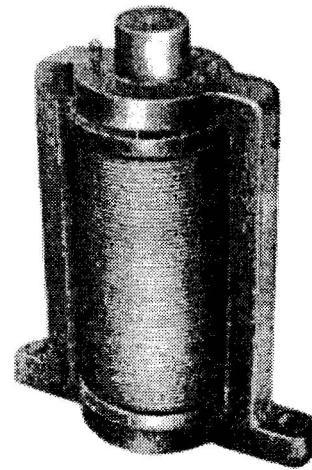
Cat. no. 365 \$6.95

ELECTROMAGNETS

**SOLENOIDS,
ELECTROMAGNETS
AND ELECTROMAGNETIC
WINDINGS**

by Charles R. Underhill
reprinted by Lindsay Publications

Creating an electromagnet is quite easy as Faraday discovered, and as you and I know. But creating an electromagnet that generates a field of needed intensity, drawing minimal amperage at available voltage without overheating is not so easy. Few people know how it's done. Here you'll learn the secrets of creating working electromagnets.



this 2nd edition in 1914. This is reprinted from one of the fourth thousand printed in 1921.

You get a practical book. The math you get is completely practical and useful. The charts are practical. All of the information is practical.

Some things have changed since 1921 such as better insulation and higher-permeability iron, but amps are still and amps and Oersteds are still Oersteds.

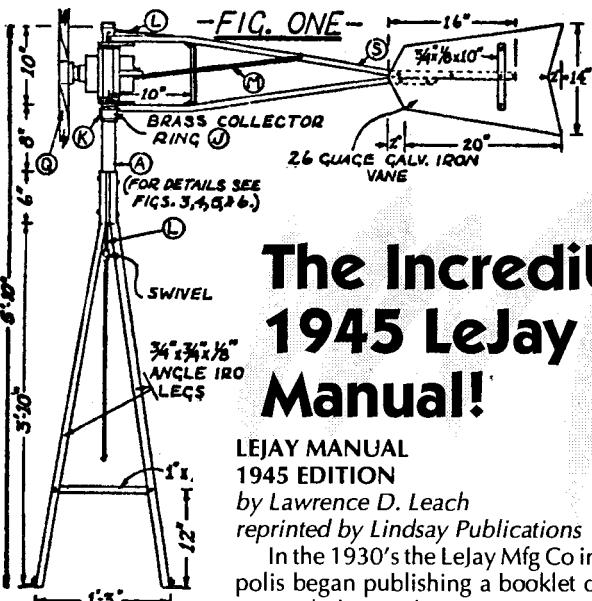
Why not build a powerful electromagnet and put it in the bushes outside your house? Pulse the juice to it, and you can roll cars over on their side as they drive by! Imagine the effect it would have on that steel plate your mother-in-law had to have installed in her head after you attacked her with the ax handle! Imagine the fun!

Or build that perpetual motion machine that some people claim is possible. Or how about a flying saucer? Or how about just getting a copy for your reference library? When the need arises, you'll have rare information immediately available. Excellent book. Get one! 4/12 x 8 paperback 342 pages

Cat. no. 20960 \$13.95

Do You Want To Receive Future Catalogs?

Because of the enormous expense of printing and mailing catalogs, we are forced to mail catalogs to only those people who are interested in receiving them. The best and only sure-fire way you can be assured of getting future catalogs is to order books. And that makes sense. If you can't find at least ONE book in this catalog that interests you enough to order, then there's little reason to continue sending catalogs. So order today, and we'll continue to send catalogs!



The Incredible 1945 LeJay Manual!

LEJAY MANUAL

1945 EDITION

by Lawrence D. Leach
reprinted by Lindsay Publications

In the 1930's the Lelaj Mfg Co in Minneapolis began publishing a booklet describing unusual electrical projects. As new editions came out, new plans were added until by 1945 there were 50 separate "chapters".

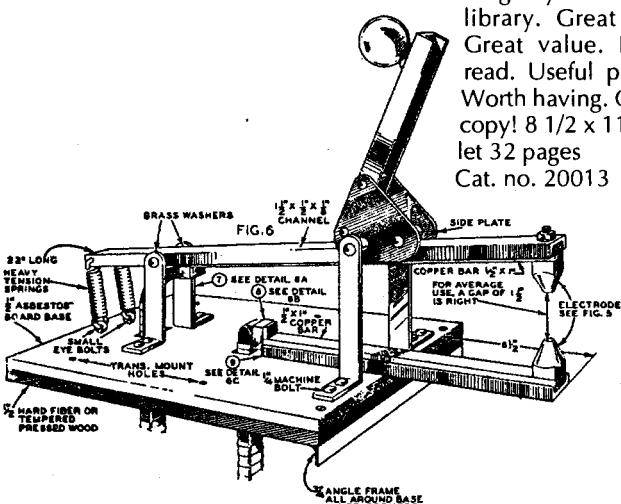
Most of the articles in this edition deal with the conversion with now-antique auto generators into 110 volt alternators, other voltage generators and motors. A lot of this info was used in areas of the country that hadn't been electrified. You could buy old generators from auto junk yards, build a windmill, repair old auto batteries, and use the electricity to run homebuilt motors, welders and so on.

Most of the information in this booklet is now of limited value simply because you can't get the generators listed. But the rewinding data, hints and tips provided can help you in other rewinding projects for other types of generators.

There ARE several projects in this booklet each of which is worth the entire price of the publication. For instance, you can build a small but useful spot welder powered by nothing more than a string of auto batteries. You get plans for an arc welder, a transformer spot welder, a carbon-arc torch, electric bicycle, a water wheel, a windmill and more. Each plan is well illustrated.

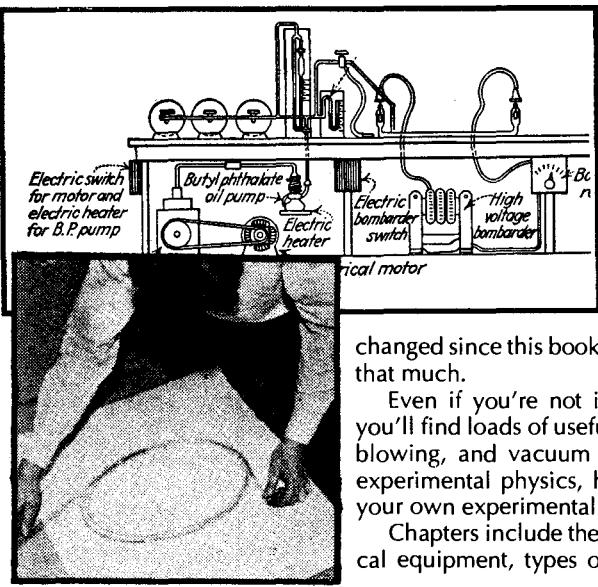


This is a manual worth having in your reference library. Great ideas. Great value. Fun to read. Useful projects. Worth having. Order a copy! 8 1/2 x 11 booklet 32 pages Cat. no. 20013 \$6.95



50 Unusual Electrical Projects and Plans

- 1 Plans for 110 Volt AC Light Plant made from Ford Model "T" Generator
 - 2 200 Watt AC Generator for Automobile Made from Ford Model "A" Powerhouse
 - 3 A 6 Volt Slow Speed Generator (with plans for all-metal windmill)
 - 4 6 Volt & 12 Volt Slow Speed Generators from Dodge "G" or "GA" Northeast Generator also from other Generators
 - 5 A 32 volt slow speed wind light Plant Generator
 - 6 One 32 Volt Motor, One 110 Volt Motor, One 32 Volt Generator, One 110 Volt Generator from Dodge Generator
 - 7 How to Make a Grinder, Series Motor, Constant Speed Motor, A Universal AC or DC Motor and a Soldering Iron
 - 8 A 75 to 110 Ampere Arc Welder Made from Dodge "G" or "GA" Generator. Also Dual Welders.
 - 9 Pendulum Type Fence Controller made from Ford "T" Coil
 - 10 Plans for Building a Complete Wind Light Plant Including Tower, Propeller and Generator Charger
 - 11 A 110 Volt AC Light Plant Generator
 - 12 A "B" Eliminator For Your Battery Operated Radio
 - 13 An Automobile Generator Booster Control
 - 14 A 6 Volt Slow Speed Generator from Standard 14 Slot 28 Bar Generator
 - 15 A 32 Volt Constant Speed Generator made from Ford "T" Generator
 - 16 A 2 Volt Slow Speed Generator from Standard 14 Slot 28 Bar Generator
 - 17 How to Convert A 6 Volt Cut-Out for 2 Volt Operation
 - 18 Directions for Repairing Your Own Batteries
 - 19 A Water Wheel Made from Old Automobile Wheel
 - 20 An Electric Outboard Motor from Old Ford "T" Generator
 - 21 A Gas Engine or Motor Driven Generator with Drawings in Detail
 - 22 An Armature Growler for Testing Auto or Slow Speed Armatures
 - 23 Two 32 Volt Series Motors from Dodge "G" or "GA" Generator
 - 24 A 32 Volt Heavy Duty Motor made from Dodge "G" or "GA" Generator
 - 25 A Bench or Breast Drill for 6, 12, or 32 Volts from "T" Generator
 - 26 A 6 Volt Motor for Drill Press, Washing Machines, etc. made from Model "T" Generator
 - 27 One 12 volt Motor and One 32 volt Motor Made from Model "T" Generator
 - 28 Two 6 Volt Generators from the Dodge, also general information
 - 29 A 110 V. or 220 VAC Portable Transformer for Arc Welding
 - 30 A 110 Volt Spot Welder — 1 Kw. Input Normal Draw 10 to 11 Amps
 - 31 A Direct Drive 32 Volt Wind Plant — All Metal Construction
 - 32 A Battery Spot Welder
 - 33 Armature Diagrams for Autolite, Bosch-Autolite and Bosch Generators
 - 34 Armature Diagrams for Delco, Delco-Remy, & Remy Generators
 - 35 Armature Diagrams for Ford A, B and V8 Generators
 - 36 Armature Diagrams for Northeast Generators
 - 37,38 Armature Diagrams for Atwater-Kent & Dyneto Generators
 - 39 Armature Diagrams for Lece-Neville Generators
 - 40 Armature Diagrams for Wagner Generators
 - 41 Armature Diagrams for Westinghouse Generators
 - 42 Plans for Installing Lights on Your Tractor
 - 43 Two Types 110 Volt AC Insect Exterminators
 - 44 An Electric Scooter Using a 6 or 12 volt Battery for Power
 - 45 An Electric "Go Bike" Using a 6 or 12 volt Battery for Power
 - 46 A Carbon Electrode Holder for Soldering, Brazing and Light Welding Direct from Six-volt Storage Batteries
 - 47 Ball Type Fence Controller Made from Ford "T" Coil
 - 48 110 Volt AC 500 Watt Self Excited Generator from Dodge Model "G" or "GA" generator
 - 49 110 Volt AC 60 Cycle 1/2 HP Synchronous Motor from Dodge Model "G" or "GA" Generator
 - 50 An AC Welding Transformer Using Dodge Generator Coils
- Appendix: Windpower Information, Definitions, etc



NEON SIGNS

Great How-To on Glass Blowing, Vacuum Systems, High Voltage and more from 1935!

NEON SIGNS
by Miller & Fink
reprinted by
Lindsay Publications

bending, pumping systems, bombarding, filling, testing, aging, installation equipment, special applications, tricks of the trade and more!

Sure. Equipment, techniques, and sign design have changed since this book first appeared in 1935, but not all that much.

Even if you're not interested in making neon signs, you'll find loads of useful information on rare gases, glass blowing, and vacuum systems that could be useful in experimental physics, high voltage, or even in building your own experimental vacuum tubes!

Chapters include the luminous tube, materials, electrical equipment, types of signs, designing the sign, glass

This is a quality straight-to-the-point book loaded with diagrams and photographs that you won't find just anywhere. It might be fun to make bizarre neon signs, repair "antique" signs, or just get into the trade. But even if that's not your goal, you'll find loads of unusual, interesting information. Consider this carefully. It certainly is NOT run of the mill. Order a copy. 5 1/2 x 8 1/2 paperback 288 pages

Cat. no. 20340

\$12.95

REWIND SMALL MOTORS

REWINDING SMALL MOTORS

by Braymer & Roe

"Practical details of repair-shop practice with step-by-step procedure for rewinding all types and designs of fractional-horsepower direct- and alternating current motors"

This book first appeared in 1925, but this is a reprint of the third edition that appeared in 1949. And it IS excellent.

From the preface to the first edition:

"Armature winding calls for a combination of skill, care, and common sense together with a practical knowledge of motor construction and operation that usually grows out of years of winding and repair experience. But even the experienced man cannot always acquire the same degree of skill in rewinding all varieties of motors. However, when experience is supplemented by practical information in usable form, any good winder can quickly pick up the essential details that make a good winding job."

...The authors have attempted to compile in this volume ... details for all the common types of windings used for portable drills, grinders, automobile starting motors, sewing-machine motors, desk and ceiling fans, vacuum-cleaner and washing-machine motors, and other similar applications... This information has been presented in step-by-step details from the start to the finish of a winding job so as to make it easy for the experienced winder to understand the procedure, to give him a grasp of the essential requirements of the windings that are used by the manufacturers of small motors, and to enable him to rewind or change them as conditions require, even

DC & AC Fractional HP

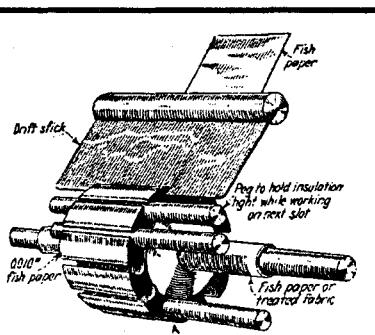


FIG. 25. Continuous-strip method of insulation. fish paper.

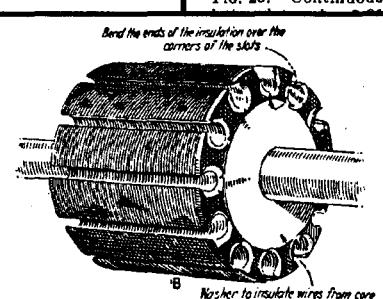


FIG. 26. After the strip of insulation has been put into all the slots the insulation is bent over the ends of the slots as shown. This armature is shown with the fiber end washer in place.

hand winding is put on a stator, how to make up a skein, rewinding a small universal motor, overlap windings, and much, much more.

Excellent book. Get a copy and put it on your reference shelf. It will be there when you need it. No searching. No swearing. No disappointment. Order a copy. 6x9 hardcover 422 pages

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though he may not have had much experience in rewinding small motors...."

You get 37 chapters that include machine loop lead windings, vee winding, connecting up hand-wound armatures, how a

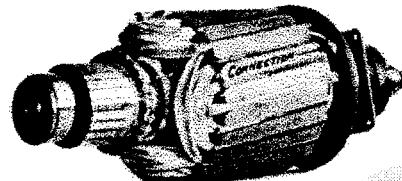
AUTOPOWER

Automobile Generator Conversions & Modifications

by S. W. Duncan

reprinted by Lindsay Publications

From out of the Great Depression comes this unusual book on ways to make auto generators produce unusual amounts of power. The major problem with this book is that the generators shown being rewound are not easy to find. But the principles taught here can with imagination be applied to modern generators, DC motors, starter motors and more. You get detailed, practical how-to that can be adapted to modern needs.



Generator Secrets!

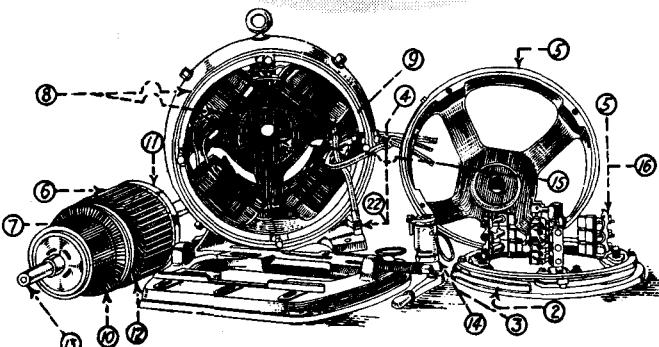
Chapters include changing a Ford Model A generator to a 110 volt alternator, get constant voltage at variable speed, converting a Dodge 12 volt generator into a 110 volt 500 watt alternator, changing a Model-T to 110 volt AC, making field and armature coils, changing a Delco generator to 110 Volt AC, the winding of automobile armatures, characteristics of DC generators, suggestions on mechanical construction of generators, figuring a new winding for an old frame, converting a farm light plant to 110 volt AC, and more.

We reproduced this from a stained, greasy, and obviously used copy of the original 1935 edition, and although the reproduction is not perfect, it is surprisingly good.

Get a copy of this. This is one of those manuals that people talk about having seen years ago, but can no longer find. Unusual info. Order a copy today. 5 1/2 x 8 1/2 paperback 56 pages

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ARMATURE WINDING AND MOTOR REPAIR



ARMATURE WINDING AND MOTOR REPAIR

by Daniel H. Braymer
reprinted by Lindsay Publications

From 1920 comes this motor rewinding book loaded with drawings and photographs that will show you how to rebuild both AC and DC machines.

Chapters include: DC machines, AC machines, shop methods of rewinding DC armatures, making commutator connections, testing DC armature windings, operations before and after winding DC armatures, insulating coils and slots for winding, shop methods for rewinding AC machines, testing induction motor windings for mistakes and

faults, adapting DC motors to changed operating conditions, practical ways for reconnecting induction motors, commutator repairs, adjusting brushes and correcting brush troubles, inspection and repair of motor starters and generators, diagnosis of troubles, methods to solve special troubles, tables and more.

You'll find a chapter that shows you how to build special tools and jigs, an armature sling, a pinion puller, coil winding machine, a coil taping machine, commutator slotter, armature banding machine and more.

The motors described are large types used in factories. But the principles apply to the smaller

motors you and I use. You'll learn how to reconnect induction motors for different voltages and phases, how to operate a DC motor as a generator and vice-versa, change the DC motor windings for different voltages, and more.

You'll be taught all the techniques - from removing old windings and cleaning slots, to winding the coils, insulating the end connections, inserting the coils, painting the windings, relining split bearings, and much more. You get data on all types of wave and lap windings, varnishing and insulating materials, and much more.

I make you no promises, but this is the logical place to start should you want to rewind a motor to particular voltage, wind a generator or alternator for use with a windmill or waterwheel, rewind a big generator for use as a welder, modify a DC motor for use in an electric car, and so on.

This is a beautiful book. You get over 500 pages of clearly written, wall-to-wall practical how-to with excellent illustrations. It's a gem that should be in the reference library of most "machine freaks" (that includes you, son). Get a copy 5 1/2 x 8 1/2 paperback 540 pages

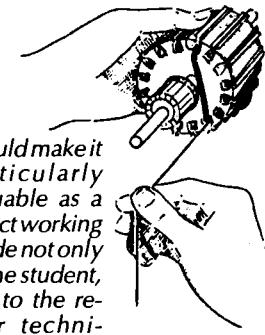
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should make it particularly valuable as a direct working guide not only to the student, but to the repair technician at the bench as well.

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Both alternating and direct current motors are treated thoroughly, and extensive consideration is given to the connections and troubles in controllers...."

Chapters include capacitor motors, repulsion-type motors, three-phase motors, alternating-current motor control, direct-current armature winding, direct-current motors, direct-current motor control, universal motors, shaded-pole motors, fan motors, dc generators, synchronous motors and generators, three-phase wound-rotor induction motors, and solid-state motor control.

You actually get a book of 349 text pages and a book of 426 illustration pages wire spiral bound into one leatherette cover. This is an industrial reference manual, and it IS quality. If you're serious about repairing motors, then this is a MUST HAVE book. Two books about 6x9 in one unusual cover

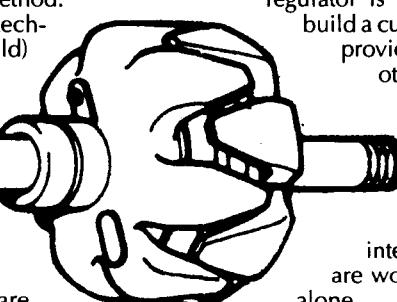
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Learn how you can make almost any ordinary induction motor (like an old washing machine motor) put out 120 volts at 60 cycles without rewinding or internal rewiring. These secrets are worth the price of the booklet alone.

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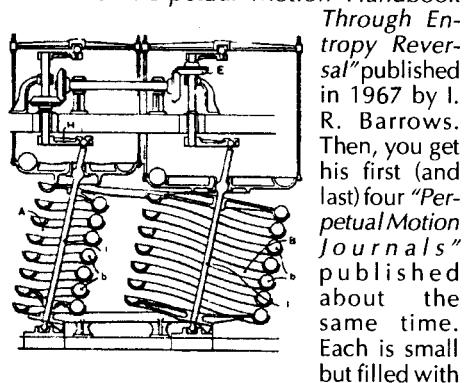
PERPETUAL MOTION MYSTERY

THE PERPETUAL MOTION MYSTERY

by R. A. Ford

Perpetual motion. Some people laugh at it. Others take it very seriously. Here's a serious look at these unusual systems.

First, you get a reprint of the small and now-rare "Perpetual Motion Handbook Through Entropy Reversal" published in 1967 by I. R. Barrows.



Then, you get his first (and last) four "Perpetual Motion Journals" published about the same time. Each is small but filled with

letters, patents, ideas, illustrations, and thought-provoking suggestions.

The author jumps into a discussion of why perpetual motion might be possible, pointing out unusual theories from the past, and pointing out possible defects in current theories.

Covered are kinetic gravitational theories of the 18th century, DesCarte's Vortex Theory, LeSage's Impact Theory of Gravity, and Brush's Wave Theory. Attempts at experimental confirmation of these theories are then provided.

Natural gravitational anomalies such as solar eclipse, bulging river surfaces, bore at sea, unusual rock movements, slowly falling hail are revealed. You'll learn about Robert Cook's inertial propulsion device and its relation to Newton's Law.

The last large section covers the Orffyreus wheel built in Germany centuries ago. The author believes it might have been the only real perpetual motion machine yet invented, the secret of which was lost. You'll learn about the inventor's life, his education, his wheels, his successes and failures, the tests, and more.

Last, the author, based on the material presented in earlier chapters suggests how a perpetual motion machine might be built.

You get a collection of strange, rarely seen stories and phenomena that might hold the key to perpetual motion, if, indeed, such a machine can be built.

This is not a construction manual, nor is it extremely complex. It's a notebook gathered over the years, one that should be interesting to believers and non-believers.

Consider it. You won't find anything quite like it on the market. Different. Unusual. Interesting reading. Get a copy.

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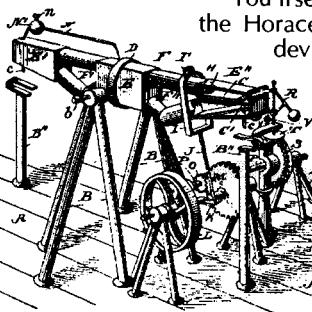
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50 PERPETUAL MOTION MACHINES

FIFTY PERPETUAL MOTION MECHANISMS

by Fred Dieterich
reprinted by Lindsay Publications

The author was a patent attorney who wrote a book in 1899 entitled "The Inventor's Universal Educator" covering the process of securing a patent. One short section of his book covers perpetual motion inventions which are unpatentable. Dieterich, who was outraged by claims of perpetual motion, presents drawings of 50 different mechanisms.



No doubt, you've already seen a number of these, but others are unique, and all are interesting.

You'll see the Marquis of Worcester wheel, the Horace Wickham machine, the 1868 device of Dr. Drasch of Austria, an electric device, the self-moving railway, the Orfyreus 1720 wheel, a complicated water screw, and others.

If you're into PM, you'll want to add this to your collection. Maybe you're trying to build a machine and want to avoid previous failures. Or you're a skeptic and want a good laugh. Whatever, the material is interesting and the price is low. Get a copy. You'll like it. 8 1/2 x 5 1/2 booklet 22 pages

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PERPETUAL MOTION HISTORY

PERPETUAL MOTION THE HISTORY OF AN OBSESSION

by Arthur Ord-Hume

People for centuries have attempted to build a machine that will produce more energy than it consumes. And they've all failed.

If you think you've invented a new type of perpetual motion machine, you had better read this book. Chances are, it has already been attempted.

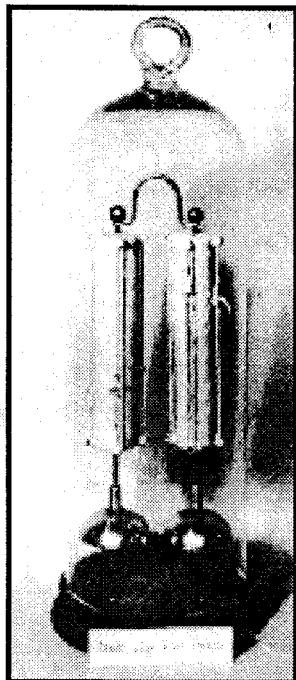
For the rest of us, this book is interesting reading. There are some machines, that don't actually produce energy, but they run seemingly forever on a small amount of energy, like Singer's perpetual chime that was set up in 1840 and is still operating!

Learn about medieval machines, self-moving wheels, lodestones, electromagnetism, steam, capillary attraction, spongewheels, Cox's machine, the Redheffer device, the Keely motor, odd ideas about vaporization and liquification, the barring of perpetual motion devices from the patent office (although the magnet motor sneaked in), rolling ball clocks, and more. You get lots of illustrations, and an excellent list of references for further reading.

Interesting book! Well written and researched. Excellent done. If nothing else, put one in your reference library. It's not all that expensive. 5 1/2 x 8 1/2 paperback 235 pages.

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CURIOS MECHANICAL MOVEMENTS

by Gardner D. Hiscox

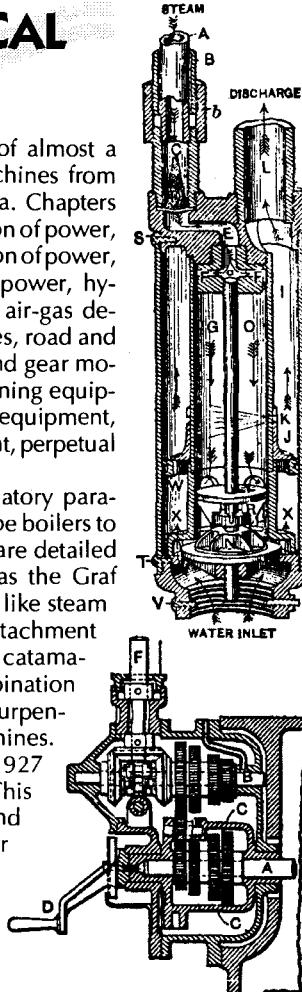
You get one super 1927 picture book of almost a thousand mechanical movements and machines from the simplest to the most complex of the era. Chapters include mechanical power lever, transmission of power, measurement of power and springs, generation of power, steam power appliances, explosive motor power, hydraulic power, air-power motors, gas and air-gas devices, electric power devices, marine devices, road and vehicle devices, railway devices, gearing and gear motion, motion controlling devices, clocks, mining equipment, mill and factory machines, textile equipment, construction machines, draughting equipment, perpetual motion, and electronics of the era.

You get a detailed drawing and explanatory paragraph for 998 different devices from flash tube boilers to double circuit crystal sets. Not all drawing are detailed enough to allow you to build one, such as the Graf Zeppelin or an early monoplane, but others like steam injectors, spring motor, and the lathe taper attachment are quite good. You'll see printing telegraphs, catamaran sail boats, two-cycle Weiss engine, combination steam and gasoline motor, a flour packer, a turpentine still, and over fifty perpetual motion machines.

The majority of devices presented are 1927 "high-tech" rather than simple mechanisms. This is a treasure trove of ideas for the inventor and experimenter, a valuable research tool for designers and historians, and a fun book for the rest of us to read. You're paying much less than I did for the original. You'll really enjoy it. Get a copy.

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507 MECHANICAL MOVEMENTS

by Henry T. Brown

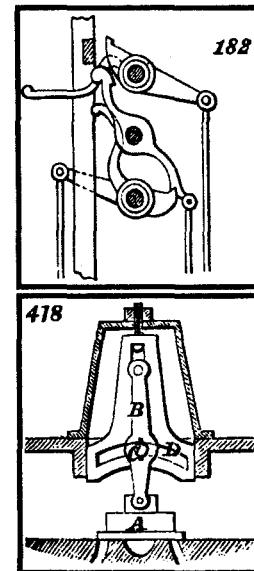
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Originally copyrighted in 1868, this 1893 printing carries a complete title of "Five hundred and seven mechanical movements embracing all those which are most important in dynamics, hydraulics, hydrostatics, pneumatics, steam engines, mill and other gearing, presses, horology, and miscellaneous machinery; and including many movements never before published and several which have only recently come into use."

You'll find each left-hand page carries nine illustrations, and each right-hand page presents brief descriptions of their operation. Some of the movements are trivial, but others are quite unusual and interesting. In some cases you'll find that these movements were popular at one time, but are no longer used. Discover Fairbairns' bailing-scoop, Anderson's gyroscopic steam engine governor, or Clayton's sliding journal-box.

If you design machines, this can be very useful to you as practical how-to info. Design and build table-top demonstrations of these movements. Great project ideas! At the very least you'll find this a great book to browse through on a rainy afternoon. Very interesting. 6x7 paperback 128 pages

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*Engraving
Glass
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Repair Briggs & Stratton

HOW TO REPAIR
BRIGGS & STRATTON
ENGINES 2ND ED
by Paul Dempsey

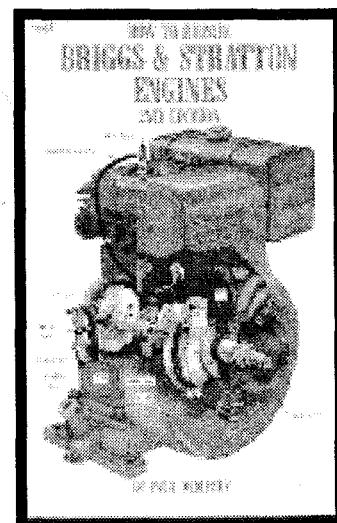
With this book and some scrounging you can recycle old Briggs & Stratton engines. Or you can keep your lawnmower going just one more year. Or build an emergency power plant. Or...

Chapters include: basics, ignition, carburetors, governors, starters, charging systems, and total rebuilding. This book is loaded with practical how-to: adjustments, troubleshooting, assembly diagrams, charts, hints and tips and all the rest.

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IMPROVED ELECTRICAL APPARATUS

Sir: There is at present one very great drawback to the study of electricity; namely, that many persons who are possessed of large cylindrical machines, are unable to produce the effects of others of, perhaps, not half the size. The fact is, that all glass is not fit for oxidation most probably owing to an occasional excess of alkali in its composition. Now, as the common green glass appears to be well adapted for this purpose, and as shell lac is the first on the list of electrics and insulators, I would recommend that all cylinders, plates, jars, rods, &c. be made of this sort of glass, and immediately lined and covered with lac, excepting always the part which is to be excited. This would be better than insulating file cylinder, as the rods are so very apt to get loose or to be broken. In Nairn's, or the most approved form of the cylinder machine, the negative conductor is always in the way, whether it is wanted or not; and the positive conductor is not placed in the most convenient position for use. Now, as in the case of charging a battery it is proper to have a small conductor, and in case of giving strong sparks it is necessary to have a large one, and as it is sometimes convenient to have a negative conductor, the following arrangement will be found to answer well.

The cylinder is mounted in the usual way (see prefixed engraving), but instead of terminating with the small wheel, there is a round projecting part with a bayonet-catch on it; there is also the same on the multiplying-wheel. The crank is made hollow, like the handle of a bayo-

net, and fits both; so that in case of the catgut breaking, it can be immediately applied to the cylinder. The advantages of the crank and of the multiplying-wheel machine are thus combined in one, for when the amalgam is first applied, the friction is much too great for the catgut to

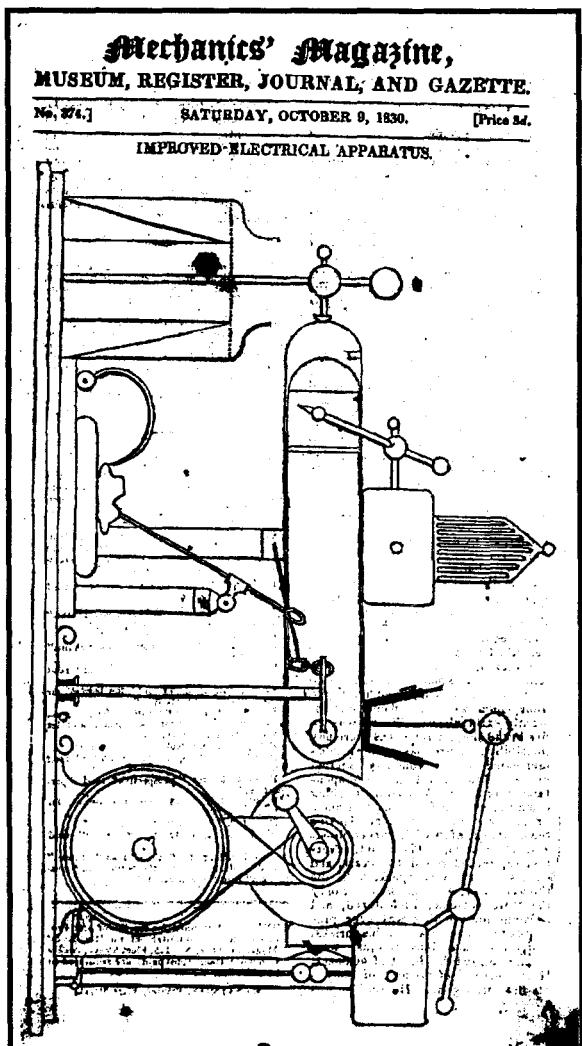
used. With respect to the silk flap my observation goes no farther than this, that I believe an oiled silk will keep the machine longer in moderate action in a damp room, but that common silk adheres closer and produces a greater effect in a dry or warm room. The bottom of the machine should be continued the whole length of the conductor; it adds so much to the steadiness of the whole of the apparatus, that a person who has once been used to it would never tolerate any other; and it does not take more stuff, as there is no necessity for a stand for the conductor, a bottom for the universal discharger, or a bottom for the packing-case.

With respect to the silk flap my observation goes no farther than this, that I believe an oiled silk will keep the machine longer in moderate action in a damp room, but that common silk adheres closer and produces a greater effect in a dry or warm room. The bottom of the machine should be continued the whole length of the conductor; it adds so much to the steadiness of the whole of the apparatus, that a person who has once been used to it would never tolerate any other; and it does not take more stuff, as there is no necessity for a stand for the conductor, a bottom for the universal discharger, or a bottom for the packing-case. It is, besides, always ready for action, as there is nothing to do but to take off the top of the case, and every thing is in its place. The best form for the conductors is oblong, of about the size of the rubber, in which shape they make very convenient stands of themselves: the fork and round end next the cylinder may be dispensed with, as the upper part of the prime conductor is cut with a Vandyke edge. The negative conductor is made a little smaller so as to fit within the positive when not wanted. When fixed at right angles on the latter, it nearly doubles its power. When fixed on the rubber, it forms the negative conductor. One of its ends fits on loose, and has a shank to it; this supplies the place of the large ball for taking strong sparks when the small conductor is placed vertically on the prime conductor. The charger passes through the end ball of the conductor; it is fixed at any height by the screw; and does away with the tops and balls of the Leyden jars. At the end is a female-screw to receive the coated and wooden points, plate-balls, balls, &c. When fixed at the side of the upper conductor, it brings the wooden points, &c. well forward into the room,

and does away with the insulated director. It also connects the prime conductor with the earth, and the negative with the positive conductor; it further connects the stools or chairs with the prime conductor by means of a rod; there is then no occasion for the patient to hold a chair. The discharger consists of a ball fixed on a short rod with a ring at the other end; at right angles to this is a ferule to fit the end of a glass rod, which has a ferule at the other end, in which is a female-screw, in which the plate having a large edge turned up smooth fits. This answers three distinct purposes, and does away with the discharging-rod, which is a dangerous thing to use in the dark with a battery, and is of little use unless it be to take the residuum out of jars.

Lane's electrometer (which, when fixed on the jar, is extremely cumbersome and liable to be broken) I have seen fitted up with a micrometer screw; the absurdity of this must be evident to any practical electrician, especially if there is the least dust in the room. In fact, the eye is quite capable of judging of any distance that is required to proportion the strength of the shock; while with the upper plate and handle of the electrophorus, this latter is generally made so short, that if the operator has a moist hand, it is rendered nearly useless. When used as a discharging-rod, the hand is applied to the lower ferule, and the whole moved up to any part of the conductor. Thus all discharges, whether of batteries, jars, spiral tubes, &c. are safely and conveniently made in the dark (the tubes, &c. have a hook at each end, one of which is hooked into the ring, and the other touches the bottom, so that there is no necessity for either balls or stands for them). When used as Lane's electrometer there is a slit in the plate, and a screw to fix it at any required distance. This makes it more secure than Lane's as the twitching of the patient is very apt to increase the distance of the balls without the operator being aware of it, which has sometimes produced unpleasant consequences. When used as the upper plate of the electrophorus, the ball takes off; the plate screws on the charger, and forms tile upper plate for charging a plate of air.

The show-jars of the shops, with thick bottoms, are generally taken to make the Leyden-jars of; and



Reprinted here from the Oct 9, 1830 issue of MECHANICS' MAGAZINE (London) comes a portion of a discussion of improvements on a glass cylinder high voltage generator commonly referred to as the Cavallo machine. An engraving and brief discussion of this generator can be found in J. H. Pepper's STATIC ELECTRICITY (No. 4783 elsewhere in this catalog.)

bear without breaking or stretching; and in cases of suspended animation it makes a serious interruption, even if the second string is at hand.

The rubber is made in the usual way, excepting that instead of a chain, the communication with the earth is made by wires and two balls, which are in contact when the prime conductor is positive, and separated or entirely removed when the negative conductor is

bear without breaking or stretching; and in cases of suspended animation it makes a serious interruption, even if the second string is at hand.

The rubber is made in the usual way, excepting that instead of a chain, the communication with the earth is made by wires and two balls, which are in contact when the prime conductor is positive, and separated or entirely removed when the negative conductor is

Improved Electrical Apparatus Con't
 which thick bottom is reckoned as coated surface, though it is known to receive a very weak charge. Now if this almost useless part were forced upwards, so as to form an inverted jar, and the middle of this back again (how often this could be repeated must be left to the glass-blower), we should have a jar that would have, at least, twice the power of an ordinary jar, without increasing the size or weight of it. And if some means could be discovered of coating metal with glass, or enamel, and vice versa, a jar might be made to have the power of an ordinary battery; indeed, until something of this sort is accomplished, battery practice must remain in the hands of the opulent, or of scientific bodies. I

have heard of a battery of plates in the shape of a quarto volume; but however well this form may answer on account of its portability, it is by no means an advantageous or convenient arrangement. For instance, take a square foot of glass and coat it; there are four edges to be left insulated and to be kept clean, but bend it into the shape of a cylinder and put a bottom in, and there is but one edge to be kept clean. The other three edges are added to the coated surface, independent of the bottom, besides being of a much more convenient form. A metal jar has been coated with sealing-wax, and this latter with tinfoil, and it has received a charge; but how far this could be carried by inverted jars remains to be tried....

MENLO PARK REMINISCENCES VOL 1

by Francis Jehl

Great Book! Not only do you get the inside scoop on the electric light, the phonograph, mimeograph, the telephone (Bell beat Edison to the patent office by one day), but you get the anecdotes that proves how brilliant and bizarre Edison really was. This was a guy that I would have liked to meet, a guy who chewed tobacco, spit on the floor, told vulgar stories and was known for his creativity and sense of humor – a true "character".

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"In this revealing book, a former laboratory assistant to Thomas Alva Edison (1847-1931) recalls life in the great inventor's laboratory and workshops at Menlo Park..."

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If you're into the history of technology, or you would really like to "meet" one crazy, talented guy, then you should have this book. Edison would have devoured this catalog had it existed in his day. He was one of us. (Well, maybe he wasn't THAT bizarre...) Fascinating book. Get a copy. 5 1/2 x 8 1/2 paperback 448 pages 113 illustrations 267 photos
 Cat. no. 377 \$13.95

THE COMPLETE BOOKS OF CHARLES FORT by Charles Fort

Strange! Very strange! A must book for anyone who researches unexplained phenomena. The dust jacket explains the book better than I can...

"Did beings from outer space visit earth in the past... are the various objects seen in the sky (flying saucers, in modern terminology) evidences of their visits?

"What is the explanation of falls of frogs, falls of fishes, falls of seashells, which have been recorded from time to time? Are they explainable in

terms of selective tornadoes, or are they evidences of a planetary mechanism that we do not know?

"How can we answer reports of strange animals, disappearances of men from open sight, curious structures in the snow, talents like teleportation and telekinesis?

"These are the 'damned,' by which the late Charles Fort

The Strange Books of Charles Fort Four Mysterious Books in One!

meant all the wide range of mysteries that are ignored by orthodox science or explained away improperly.

"Charles Fort worked full time for twenty-seven years at the British Museum and the New York Public Library researching scientific journals, old periodicals, newspapers, and manuscript accounts to gather material on phenomena from the borderlands between science and fantasy. His researches appeared in four books, *The Book of the Damned* [1919], *New Lands* [1923], *Lo!* [1931], and *Wild Talents* [1932].

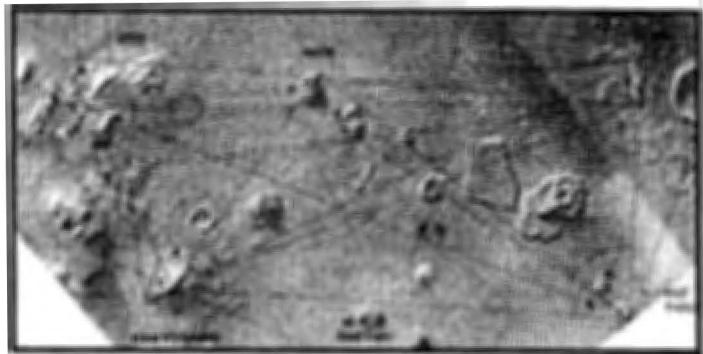
"In these four volumes Fort gathered together, organized and commented on a wild host of phenomena: flying saucers seen in the sky before the invention of aircraft, flying wheels, strange noises in the sky; correlations between volcanic activity and atmospheric phenomena; falls of red snow; falls of frogs, fishes, worms, shells, jellies; finding of 'thunderbolts'; discrepancies in the schedules of comets, sightings on Mars and the moon; infra-Mercurian planets; inexplicable footprints in snowfields; flat earth phenomena, disruptions of gravity; poltergeist phenomena; stigmata; surviving fossil animals; the Jersey devil; Kaspar Hauser; spontaneous combustion....

"Charles Fort himself never really explained his phenomena... yet through the years his following has grown...."

In this three-inch-thick hardcover book you'll find more details on more strange, unexplained events than you'll find anywhere else. It's an incredible collection that should be part of any library on fringe science. If you specialize in the gray area at the outer edge of science, you must have a copy of this. Recommended.

No illustrations, but there is a complete and detailed index.
 5 1/2 x 8 1/2 hardcover 1126 pages
 Cat. no. 750 \$29.95





THE MONUMENTS OF MARS

by Richard C. Hoagland

From the back cover:

"Either these features on Mars are natural and this investigation is a complete waste of time, or they are artificial and this is one of the most important discoveries of our entire existence on Earth. If they are artificial it is imperative that we figure them out, because they do not belong there. Their presence may be trying very hard to tell us something extraordinary." Richard C. Hoagland

A painstakingly researched study of incredible NASA photographs indicates that a highly advanced civilization may actually have inhabited Mars hundreds of thousands of years ago.

In 1976, NASA sent four Viking spacecraft to Mars to photograph the planet and test for the presence of life. As part of the mapping sequence, one of the orbiters photographed a mile-long mesa that uncannily resembles a human face. Richard C. Hoagland now in the forefront of the Mars investigation discerned the presence of additional monuments and structures, including what is possibly an underground city, through careful analysis of NASA's photographs

Mysterious Monuments on Mars?

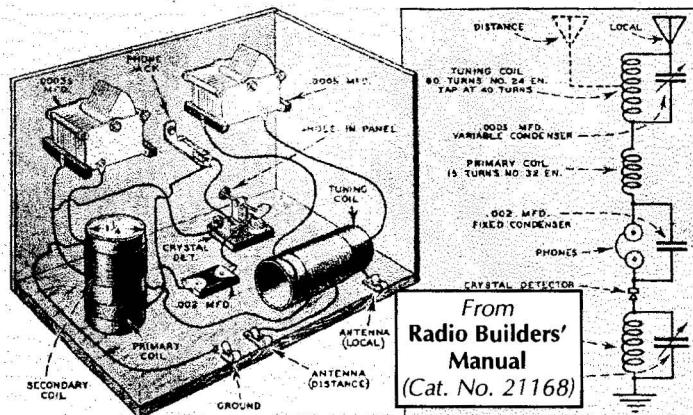
and consultation with scientists. The artifacts are the 1,500-foot-high human-like 'face' and a surrounding complex of massive, hollow pyramids possibly containing a message encoded in their geometrical arrangement.

This third edition contains new photographs and updates the discoveries made in the last several years particularly the numerical relationships of the objects and is being published in response to literally thousands of requests for such information..."

Personally, I don't believe this anymore than I believe there is a Bermuda Triangle. But whether or not you want to believe Mars was inhabited by a long-dead civilization or not is immaterial. Anyway you slice it, this is interesting reading. Great photos. Even a skeptic like me can enjoy this. Consider it carefully. 6x9 paperback 420 pages

Cat. no. 767 \$16.95

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SCIENCE

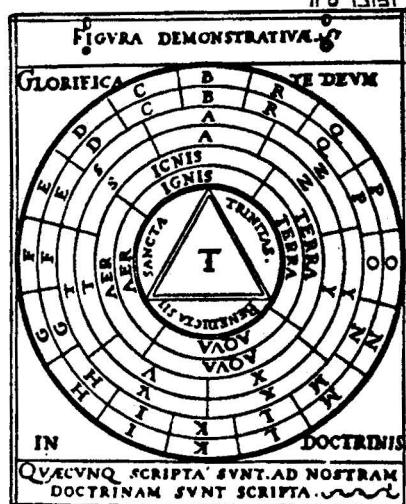
Good, Bad and Bogus

by Martin Gardner

Great book from a great skeptic, clear thinker, amateur magician, math enthusiast, and who knows what else. I remember Martin Gardner as the author of the well-known and widely-appreciated column "Mathematical Games" that appeared for many years in Scientific American magazine.

If you like to believe in wild stuff, this book could very well shatter your dreams. Gardner will "knock you on your butt" if you be-

crazy books on black holes, and more. The author points out how Conan Doyle could not have created the character of Sherlock Holmes and that there was probably a true-to-life model for the mysteries published under Doyle's name. And there's so



lieve in Atlantis, Velikovsky's or Reich's theories, or even Hubbard's Dianetics. And maybe that's what you need if you take these ideas seriously. It's fun to read horoscopes, but if you structure your life (or your Presidency) around astrological predictions, you're in BIG trouble. And too many people are already in trouble over their heads.

Gardner walks you through the mysterious stuff that is so entertaining but little else: the Ars Magna of Ramon Lull, reading without seeing, ESP learning, bending spoons with paraphysics, Modern Spiritualism, Uri: A Journal of the Myster of Uri Geller by Adnrija Puharich,

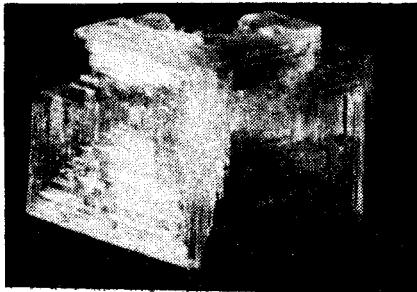
much more.

If you are desperate to believe in these fringe theories, you won't like this book. But if you enjoy wandering through the crazy things that people want to believe in without any hard evidence, this you will like. I've been exposed to many new theories. (And I thought I had heard them all....)

I'm a skeptic, too. And although I don't believe his theory, one of my prized possessions is a copy of *Worlds in Collision* autographed by the author, Immanuel Velikovsky, and dedicated to anthropologist, Margaret Mead. The point is, whether you want to believe or not, this book and the topics it covers make for interesting reading. Consider a copy. It can expand the world of the bizarre for you. ('Course reading this catalog may be bizarre enough for most of us...) Fun. 6x9 paperback 412 pages

Cat. no. 770 \$16.95

GROW CRYSTALS!



CRYSTALS AND CRYSTAL GROWING by Holden & Morrison

Crystals exist in everything from your TV set to the castings you pour. Learn about what crystals are and how they grow. Learn how to grow your own, easily and inexpensively.

Chapters include: solids and crystals, solutions, solubility diagrams, two methods for growing crystals, building blocks for crystals, twelve recipes, symmetry, arrangements of atoms, cleaving and gliding crystals, melting and transforming, piezoelectric effect, optical experiments and more. You also get sources of supplies, making a spectroscope, suggestions for research, more books and articles.

Excellent book. Easy to read and understand. It was first published in 1960, so you know it's a good book. Get a copy. A great science fair project. 5x8 paperback 318 pages

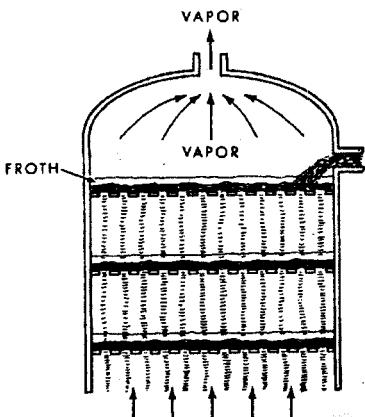
Cat. no. 546

\$12.95

DISTILLATION Principles and Design Procedures by R J Hengstebeck

Sure! You can take a tea kettle, attach a copper worm and be distilling moonshine in an hour or so. And you can go blind quicker than that! But what if you want to produce 300 gallons of fuel alcohol for your automobile? That's another story.

Here's a full tilt industrial handbook on distillation, a process that is used to make booze,



Industrial Distillation

refine oil, and manufacture all types of valuable chemicals.

Chapters include volatilities and equilibrium relationships, distillation operations, column internals, equilibrium flash vaporizations, design of distillation columns, stage and reflux requirements in continuous distillations and batch distillations, efficiencies of column internals, sizing columns, control of distillation operations, other design considerations, estimation of equilibrium data, estimation of enthalpy in design work, and more.

If you're seriously considering building a still, this is a book that will deliver more information than you'll need. You get charts, diagrams, graphs, tables, equations, photos and a lot more. This isn't a moonshine book. This is how the big boys do it.

Expensive, but a great reference. Consider it. Originally published in 1961, I'm surprised that it is still being reprinted. But who knows for how much longer? Get a copy. 6x9 hardcover 365 pages

Cat. no. 216

\$34.50

LOCKS & LOCKSMITHING 3RD EDITION by Roper & Phillips

From the back cover:

"Whether you're an experienced locksmith, someone who's just starting out in the locksmithing business, or a do-it-yourselfer who wants to put in his own security system, there is no better place to turn for guidance in selecting, installing, and maintaining today's most advanced locks and security hardware..."

You'll find the very latest information on

•All kinds of locks and keysets – including pad-lock, warded, lever, disc-tumbler, schlage wafer-tumbler, pin-tumbler cylinder, double-

BE A LOCKSMITH!

bitted, and combination •Home, business, office, automotive, auxiliary door, and vending machine locks •High-security mechanical locks and electrical access and exit control systems •Master keying systems •Lock decoding, lockpicking, and emergency entry tools and procedures •The business and law of locksmithing, including standards for locksmith licensing, bonding, and certification •Locksmithing equipment manufacturer and suppliers •Plug follower and holder diameters for today's most popular locks..."

This is a book we have offered for many years – updated and better than ever. Loads of illustrations and practical how-to. Excellent book. Order a copy today! 7 1/2 x 9 paperback 437 pages

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BUYING A CAR? How to Stick It to the Dealer

(written by a dealer...)



BUYING YOUR NEXT CAR

How to Stick It to the Dealer Before the Dealer Can Stick It to You by J Michel White

"New or used, purchased or leased, here's an easy-to-use, step-by-step guide for winning the car-buying game. You'll learn how to: level the playing field, develop your own game plan, and win a fair deal on your own terms.

This indispensable book provides you with the all-important answers to questions like: How much does the dealer really pay for a car? How much can I really get for my trade-in? How do I know I'm getting the best deal? How can I turn the dealer's tricks to my advantage? Can I really afford the car I want? Should I consider leasing my next car?"

Gonna buy another car? Get

hip! Do a better job this time negotiating for the best price, whether buying new or used. Or for that matter, even if you intend to buy a worn-out hulk or a confiscated luxury car at a government auction. The tips are here.

The author started out buying a '48 Plymouth when he was 15 years old, and has since owned more than 170 cars?!? Needless to say, he has been a super car salesman, and he knows the tricks. Here, he'll teach them to you.

Get hip. Get a copy. The money you save could buy you a copy of every book in this catalog! We'd both like that! 5 1/2 x 8 1/2 paperback 138 pages

Cat. no. 493

\$8.95

Make Molds for Auto Bodies, Boat Hulls, & Airplane Wings!



ADVANCED COMPOSITE MOLD MAKING

by John J. Morena

If you want to mass produce a fiberglass auto body or boat hull or just make a few replacement fenders for an antique car and sell them, you'll need a mold upon which to lay-up the part. If you're really a hot-shot you may want to fabricate an experimental airplane you've designed using carbon-graphite fibers. It doesn't matter how big or how small your project is, you'll need a mold. And here's a dynamite book on building molds.

From the dust jacket—

"All the design and engineering tools you need to produce molds that yield quality, trouble-free advanced-composite components are in Advanced Composite Mold Making.

Exceeding all other available works in scope and new-method coverage, this all-in-one resource guides you through the manufacture of both metallic and nonmetallic molds used to form or bond advanced composite parts and assemblies. It provides detailed instruction on how to use each kind of mold-making material and execute each mold-making process.

Step by step you will see how to use innovations such as computer-

aided design and manufacture of molds and tools... preimpregnated laminate fabric materials, and mass casting compounds that can be heated to 3000 degrees Fahrenheit... techniques for making metal-faced laminate tools... and reusable vacuum bagging methods. This invaluable resource shows you how to apply these innovations to the production of molds that in turn produce reliable composite parts.

Furthermore, you will find procedures for solving any mold or tool design problem in the shortest time possible. A wealth of tabular data assists you in designing advanced composite parts for the aircraft, aerospace, marine, transportation, leisure, sport, and other industries.

Unequaled coverage of a wide range of mold materials enables you to select the material most suitable to your project. Clear guidance is given on how to use epoxy, polyurethane, plaster, wood, ceramic, reinforcements such as fillers, graphite and fiberglass, laminated phenolic, formed and machined aluminum and steel, electroformed nickel, and many other materials to make high-quality advanced-composite molds.

You can depend on Advanced Composite Mold Making for all the design and engineering guidance necessary for making molds for producing high-quality advanced composites. It is an indispensable reference tool for all advanced-composite engineers, designers and educators."

Other books will show you how to fabricate fiberglass, but how many give details on moldmaking? Here's the best I've seen. Consider it carefully. 6x9 hardcover 431 pages Cat. no. 495 \$65.95

TECHNOLOGY OF CARBON & GRAPHITE FIBER COMPOSITES

by John Delmonte

Planning to build a stealth automobile that can rocket 120 miles an hour down the interstate and yet not register on Smokey's radar? If so, you'll need composites, and this book will take you into this hot technology.

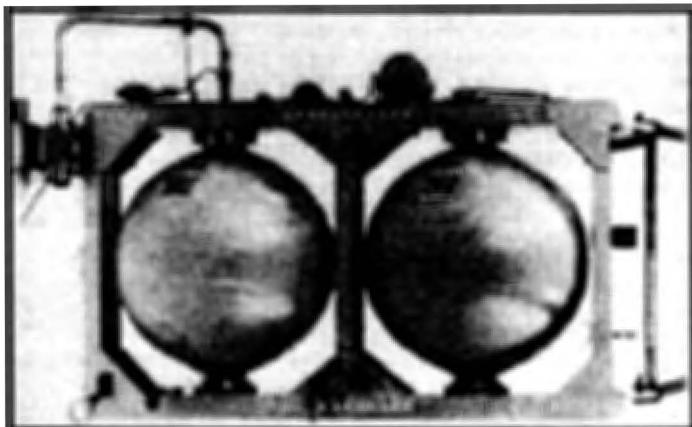
What are composites? Fiberglass is one. Here you have glass embedded in a resin matrix. Replace the glass with carbon or graphite fibers and you end up with an incredibly strong, lightweight plastic material that is used as fan blades in jet engines, as heavy duty truck springs, or even as pressure vessels to hold oxygen, nitrogen, and helium on the space shuttle.

Chapters include: origins of carbon and graphite fibers, preparation and properties of carbon and graphite fibers, synthetic

resin matrices for service to 200°C, matrices for use up to 300°C, thermoplastic matrices, surface treatments and their effect on composites, mechanical and physical properties, electrical properties and applications, environmental influences, test methods for advanced composites, composites in aircraft and automotive applications, industrial and commercial applications, high temperature resistant matrices, and manufacturing and processing techniques.

This is a great introductory industrial text. You get charts, tables, chemical structures, test data and loads of detail you'll never get from some men's magazine article. Obviously, this is not going to reveal top secret methods used by the military to build stealth fighters, but you'll come away from this book with

Technology of Carbon & Graphite FIBER COMPOSITES



in-depth knowledge of composites.

Expensive, but this book delivers the secrets of a high-tech material science. Tune it, and

find out what's happening. Maybe you can find a way to fabricate your own! Get a copy! 6x9 hardcover 452 pages Cat. no. 1143 \$46.50

SPINDLE TURNING

FACEPLATE TURNING

by the editors of Fine Woodworking Magazine

"Virtually any chunk of wood can be buttoned onto a lathe and made to whirl around. Knowing how to transform the whirling wood into a finely crafted plate or bowl is the art of faceplate turning. In this collection of 42 articles from Fine Woodworking magazine, some of today's best turners show you how they create everything from a drinking goblet to a matched set of bowls. You'll learn about preparing glued-up turning blanks, using the modern bowl-turning gouge, choosing a finish that's safe for food, and much more..."

Titles include: the turned bowl, the bowlmaker, harvesting green wood, turning a matched set of bowls, turning goblets, grinding turning tools, hollow turnings, turning spalted wood, turning full circle, decorative turning, laminated turnings, inlaid turnings, bandsawn baskets, poured pewter inlay, small turned boxes, and much more.

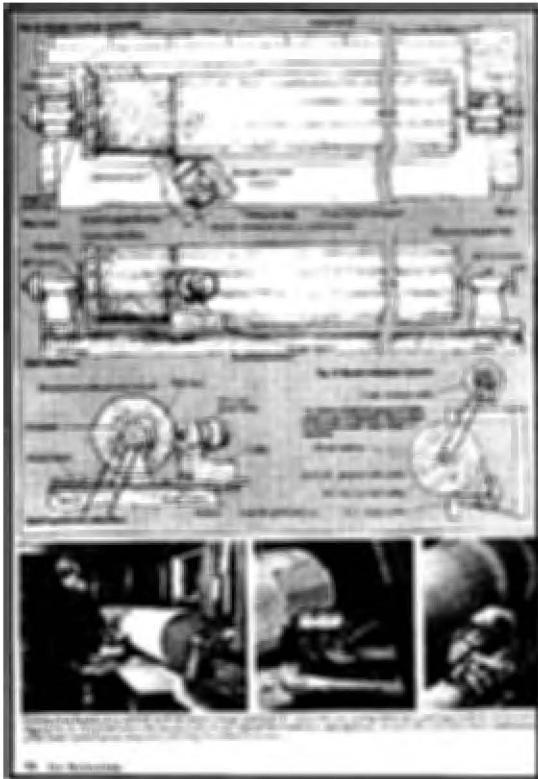
You get great articles that a combination of detailed how-to (called true craftsmanship), hardware details, and fine art (the finished product). When you finally turn out work as beautiful as that pictured, you will have arrived. You'll really have something to be proud of.



Fast, fun reading. Lots of details, tricks and tips. After all, these are reprinted magazine articles. Consider it carefully. 8 1/2 x 11 paperback 106 pages

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SPINDLE TURNING

by the editors of

Fine Woodworking Magazine

"When it comes to efficiency, nothing beats the lathe. You can use it to size, shape, smooth and finish a piece of wood all in one operation. And the variety of useful things you can make on a lathe is vast — everything from porch pillars to baseball bats. In this collection of 39 articles from Fine Woodworking magazine, some of the past decade's most accomplished and inventive woodturners share their secrets. They show you how



LATHES AND TURNING TECHNIQUES

by the editors of
Fine Woodworking Magazine

Great articles reprinted from the magazine. Color photos throughout. Great info!

I counted 36 articles with titles like: production tips from an architectural turner, tool rests

WOOD TURNING TECHNIQUES

and turning tactics, boatbuilder's bowls, turning large vessels, lathe duplicators, efficient spindle turning, the Old Schwamb Mill, Vermont Turning School, chasing large wooden threads, economy lathes, heavyweight lathes, the bowl gouge, woodturning chisels, chucks for woodturning, backyard timber, and much more.

A couple of articles of interest are those that will show you how

to build a woodturning lathe: a beer-box lathe and shopmade lathes (a big one!). You really don't have to sell the kids to the gypsies to raise the money to buy a lathe. You can build one. Fascinating ideas from people who have done it.

Great how-to. Fun reading. More ideas than you can try in a month of Sundays. Get a copy. 9x12 paperback 127 pages

Cat. no. 5006

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to use the turner's gouge and master one of the most difficult of tools, the skew chisel. They also offer a wealth of clever shop tips, plans for making tools and gauges, and even advice about achieving the look of turned wood without a lathe."

Some of the articles you get are: a shop-built lathe duplicator, how to make a wooden flute, old-fashioned turners' gauges, the Louisville Slugger, building a spinning wheel, what bobbins do, coopers' columns, ornamental turning, Holtzapffel revisited, buy the parts and build the bed, turning without a lathe, woodturning on a metal lathe, and much more.

Good stuff. Great text, how-to, hardware, and art. Get a copy. 8 1/2 x 11 paperback 88 page

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**THE PROP
BUILDER'S
MASK-MAKING
HANDBOOK**

by Thurston James

Here's another great book from the author of *The Prop Builder's Molding and Casting Handbook*. It's well illustrated and top quality.



INCREDIBLE MASK MAKING HANDBOOK!

Making masks can be a lot of fun, but even if you're not into making a mask to cover your mother-in-law's ugly puss, you'll learn valuable lessons in working with materials. And these lessons should be applicable to other projects.

The basic sections include masks and persona, early man and his masks, life masks, the neutral mask, character masks, leather masks and the commedia dell'arte, mask-making workshop in Padua Italy, making a mask in leather, other leather-working techniques, and appendix.

Discover how to make an alginate life mask of that favorite



orthopaedic tape, celastic, and glue cloth. You'll also learn how to decorate the mask with fabric, animal fur, and how to simulate a metal finish.

The second half of the book will show you in detail how to work leather into incredibly beautiful masks. You get all the details on tanning, molds, tools, making splices, finishing, coloring and more. These are works of art - something to be proud of.

You'll learn how to turn sheet metal into a beautiful



person in your life (other than your dog or bartender). Make positive and negative molds, and make a positive plaster copy of the life mask.

Make a plaster negative mold from an original mask design and use it to make paper mache, latex rubber, neoprene or "friendly" plastic positives. You can make a positive gypsum cement mold. And you'll learn how to create a mask from a positive mold by vacuum-forming, thermoplastic

mask with chasing and repousse. Then you'll learn the techniques involved in producing fantastic halloween masks. You'll learn skills and secrets. You may be able to make big bucks since masks are popular decorating items. Who knows?

Excellent book. Wall to wall how-to. Heavily illustrated. A book definitely worth having. Get one! 8 1/2 x 11 paperback 203 pages

Cat. no. 1340 \$19.95

STONEWARE & PORCELAIN

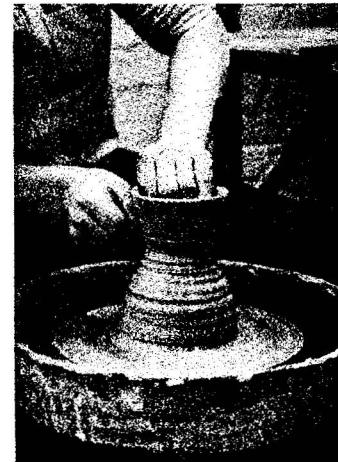
**THE THAMES AND HUDSON
MANUAL OF STONEWARE
AND PORCELAIN**

by David Hamilton

An excellent British book for potters looking for information beyond the basic. From the back cover:

"Ceramic ware produced by firing to high temperatures has been known since ancient times, but only became widespread in Europe after the eighteenth century. It includes the hard and durable stoneware, associated with such uses as ovenware, and porcelain, whose fine translucent qualities make it ideal for small decorative sculptures and elegant tableware, and have been exploited by famous makers from Spode to Wedgwood and Minton.

This manual is especially directed to students who have had experience with pottery. It describes the chemistry and phys-



ics concerned in the composition of clays and glazes, and analyzes clearly the processes and techniques involved in their preparation and use, with detail on firing procedures. The author's central aim is to encourage an experimental attitude in the potter, so that new and original results in shape and decoration may be obtained. He describes essential methods for forming clays, including throwing from the hump; wire cutting and turning the base for mass production or editioning; and he gives key information on technical processes such as model and mold making, jiggering and jolleying, slip casting and press molding. David Hamilton is Head of the Department of Ceramics at the Royal College of Art."

Well illustrated. A quality book. Worth having. 6x9 paperback 168 pages 115 illustrations 15 in color

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**LINDSAY'S WACKO
CATALOG COVERS**
recovered from the trash can

Reread the bizarre catalog back covers that have made Lindsay's name a household word in mental health clinics throughout the world. You get 28 bizarre covers some of which have been known to make people jump from bridges. The booklet is actually free. The price reflects handling and shipping more than anything else. While they last! Something to clutter the coffee table or line the garbage can... 8 1/2 x 11 booklet 31 pages

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FREE IF WITH ANY ORDER OVER \$40.00. You MUST request one.



**THE PROP BUILDER'S
MOLDING & CASTING
HANDBOOK**
by Thurston James

Try this! Take a dead carp and make a couple two-part plaster molds before it starts to decompose. Then make urethane castings with the molds. These are the Hollywood uses to make S.

This is a great book all about making molds and casts for theatrical uses. You'll learn about one- and two-part plaster molds, a two-part mold using the shim method, molds from dental alginate and moulage, and a variety of molds using latex rubber, Silicone RTV rubber, injected Silicone molds and more.

The Secrets of Casting Almost Everything Except Metal!



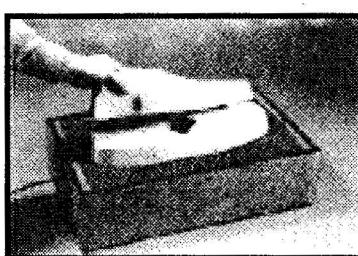
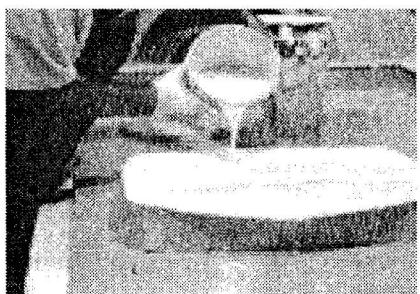
You'll learn what type of release compound to use for each combination of mold and casting material.

Then you'll learn how to do absorption casting with latex and neoprene casting rubber. You can make papier-mâche, Celastic and fiberglass casts. You can cast with hot melts such as wax, machinable wax, hot plasticine, hot melt glue, and hot melt rubber. You can make fake "glass" bottles to break over people's heads, or panes of glass to safely throw people through during a barroom brawl (or the Christmas family get together). You might want to cast with polyester resins, urethane foam, plastic wood, Durham's Rock Hard and more.

Then there is a whole section on vacuum forming with thermoplastics using a large, high-performance, home-made vacuum forming machine. You can watch as artists reproduce railings, cornice molding and even tile roofs in lightweight plastic sheeting. It's quite impressive. And the whole book shows you how you can do it, too.

You could probably make rubber masks of your mother-in-law's face and sell them at Halloween.

Wall-to-wall photos. Detailed how-to. Hints, tips and secrets. This is a book on casting practically everything EXCEPT metal. Rare information. I think you'll really like it. You get your money's worth, and then some in my opinion. 8 1/2 x 11 paperback 236 pages Cat no 1328 \$19.95



"...do simple forming for around \$15.00 or less..."

MOLD PLASTICS! Build a Vacuum Forming Machine

Do It Yourself Vacuum Forming
by Douglas E Walsh

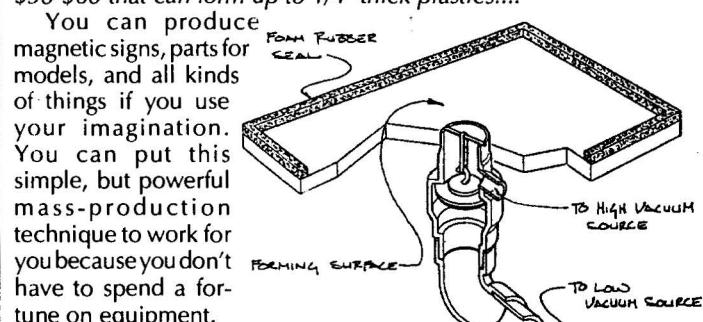
The author wrote me:

"When I tried to do research for this book I was surprised at how little information there was on the subject of Vacuum Forming. When I was put in charge of buying a machine for where I work, I was amazed at how few sources there were and the high cost of a simple machine...."

I tried the obvious way first, as I'm sure many others have by using a kitchen oven and shop vacuum cleaner. The results were OK, but limited to simple parts in thin plastics. The oven part works fine but the vacuum cleaner just didn't provide enough vacuum. This must be what discourages most people because real vacuum pumps cost hundreds of dollars..."

Not to be discouraged, I thought about it some more and came up with eight other sources for vacuum, most of which are inexpensive and one is totally free! I was then able to combine a vacuum cleaner with a cheap source of higher vacuum. This gave me that magic combination of high vacuum and high flow necessary for serious forming.

This easy-to-read book shows you how to get set up to do simple forming for around \$15.00 or less if you scrounge for parts. You can also build a two-stage high vacuum system for \$50-\$60 that can form up to 1/4" thick plastics...."



Chapters include the basics, heat sources, vacuum sources, forming equipment, plastics, molds, forming and finishing. You get straight forward to-the-point how-to with plenty of photos and drawings.

Possible money maker! Fun to try. Here's an excellent book by a man who has done it, and explains it clearly. Get a copy! 5 1/2 x 8 1/2 booklet-style spine 128 pages Cat. no. 1308

\$9.95

Keep Those SOB's in Line!

COPING WITH DIFFICULT PEOPLE

by Robert M Bramson

"The proven-effective battle plan that has helped millions deal with the troublemakers in their lives at home and at work!"

The next time they try to pull something like that on you it's not going to work! Bosses, friends, family members, they've made your life hell — until now! Based on fourteen years of research and observation. Dr. Robert Bramson's proven-effective techniques are guaranteed to help you right the balance and take charge of your life. Learn how to: • Stand up to anyone — without fighting • Blunt a sniper's attack • get a clam to talk • cut off a Sherman tank at the pass • manage bulldozers • get stallers off the dime • move a complainer into a problem-solving mode

Learn the six basic steps that allow you to cope with just about anyone. Reclaim the power that rightfully belongs to you in any relationship!"

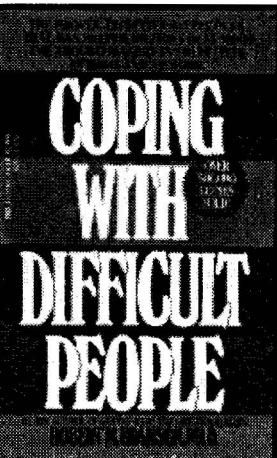
I offered this before in hardcover. Now after 500,000 copies sold, you can have an inexpensive papercover edition. And it IS good.

Personally, I think Bramson wasted fourteen years in research. I come from a long line of microcephalics, and if he had spent only five minutes with my family, he would have encountered every type of emotional retard this side of the Monongahela river! I haven't really needed this book to deal with them since I chained them up in the basement. But you can use it effectively in your everyday life. (If you find yourself in this book, you're in big trouble, because we might be related! Horrors!)

Get a copy. Keep those SOBs in line. 4x7 paperback 226 pages — mercifully, no photos

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KRESKIN'S SECRETS!

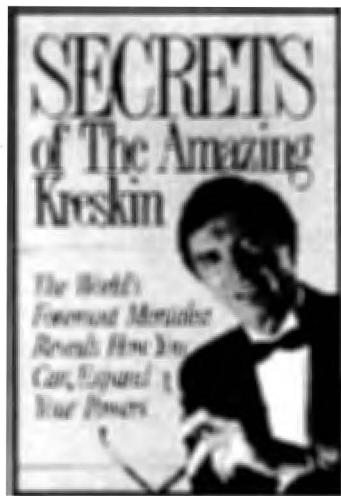
SECRETS OF THE AMAZING KRESKIN

by Kreskin (who else?)

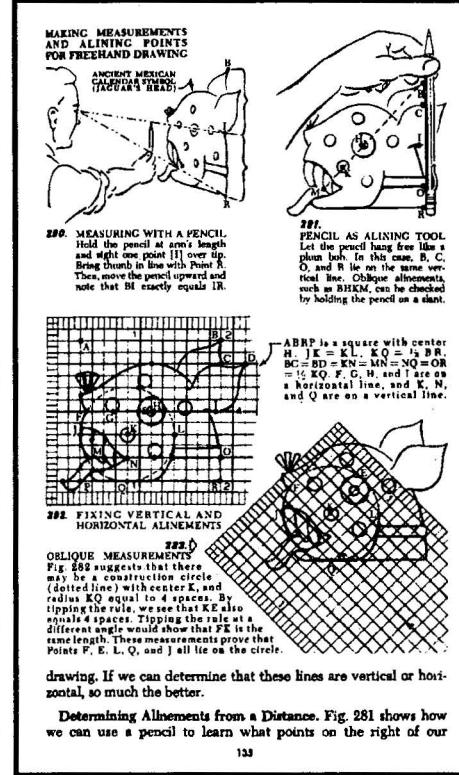
You must have seen this dude on Johnny Carson in years past. I rarely watched Johnny Carson, and even I know who this guy is. And now he reveals his secrets. (And all along you thought this guy was telepathic... shame! shame!)

From the backcover—

"For over three decades the Amazing Kreskin has been astounding audiences with extraordinary mental feats. In Secrets of the Amazing Kreskin the world's foremost mentalist reveals how readers can use their own latent mental powers to accomplish effects that resemble telepathy, clairvoyance, and hypnosis through completely natural means. Kreskin insists that there



is nothing supernatural about such mental abilities. He even discounts so-called 'extrasensory perception' and redefines ESP as

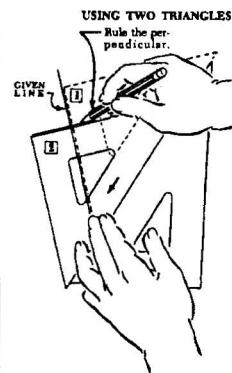


THINKING WITH A PENCIL
by Henning Nelms
"With 692 illustrations of easy ways to make and use drawings in your work and in your hobbies."

"Originally published in 1957, Thinking with a Pencil was one of the very first books to attempt to break through the conceptual barriers between words and images... It explains how to draw for those who want to use it for that purpose, but the real value is in the fresh techniques of using illustration as a thinking tool and as a means of organizing and presenting ideas."

I know some really talented mechanics and machinists who build new ma-

Think With a Pencil!



chines by trial and error. If they would only take a few minutes and sketch out their ideas, refine them on paper, they'd find that they'd make fewer mistakes and fewer false starts once they got out into the shop. In other words, thinking with a pencil would make them more successful. I've been doing this for years. You should, too.

If you don't know how to think with a pencil, then get a copy of this book. It's good. You'll learn everything from drawing, to isometric drawing and more. A lot of book for the money. Master this skill. Order a copy of this classic text today. 6x9 paperback 347 pages Cat. no. 6023 \$14.95

'extremely sensitive perception' a heightened awareness of subtle clues which everyone is capable of developing.

You will be amazed and amused by what Kreskin can teach you about your own potential. Learn how to raise your level of awareness, increase your powers of concentration, discover unknown strengths, utilize the power of suggestion, influence attitudes and behavior, produce 'hypnotic' effects, predict with educated guesses, locate lost objects, and 'read' the thoughts of others by becoming attuned to the subtle clues of body language and facial expression.

According to Kreskin, 'few of us have tapped more than a fraction of our mental potential.' In this book he reveals how anyone can condition mind and body to release the extraordinary strengths and abilities of the unconscious."

In addition, you'll learn some of his "magic" tricks that fooled people on the Tonight Show. Fascinating book. Amaze your friends! Your girlfriends! Your dog! Order a copy. 6x9 paperback 166 pages Cat. no. 769 \$14.95



HOW TO START A BUSINESS WITHOUT QUITTING YOUR JOB

by Philip Holland

If you think you're going to keep your present job forever, and you'll never have to face the prospect of losing it or taking pay cuts, then I'd say you're a damned fool. The world is changing and will continue to change. There are no guarantees in life. And you could be looking for work very shortly.

If you're self-employed, you stand a much better chance of surviving. Ask anyone who successfully runs his own business. You can bet that in hard times the owner will be the last person to get laid off. It's tough to start a business, but it is done everyday, and it can be fun. It does NOT take brains, education or money. It takes hard work, belief in one's self, some pride and an idea. You can get ideas from this book. You have to supply the rest.

You'll learn how to get a

Start a profitable business on the side!

business going on the side. You'll explore the possibilities, problems with financing, involving the family, deciding when to quit your job, and more. And I like the one chapter entitled "It's never too late". Ask Col Sanders. He started Kentucky Fried Chicken when everyone else retired. He sold it in just a few years for two million dollars!

Lindsay Publications started in a corner of a basement after hours with \$50. One of our current warehouses is more than big enough to house an NBA basketball court and bleachers. You can do it, too.

This book will NOT supply all the answers. It will point you in the right direction. Moonlighting is a safe way to test your ideas before you jump in with both feet.

Get a copy, and create a job over which YOU have control. You'll have a better chance of weathering hard times down the road. Join a very exclusive fraternity of people who have graduated from the school of hard knocks. Consider this carefully. 6x9 paperback 168 pages

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HOW TO BE AN IMPORTER AND PAY FOR WORLD TRAVEL

by Green & Gillmar

You can build a business importing goods and achieve financial independence. It's possible. But it's also possible to use small time importation as a way to pay for world travel. That could be fun!

From the backcover—

"Completely revised and updated for the 90s, here is the information you'll need on where to go, what to buy, how to pay for it, how to get it home, and how to sell it. Included are current tariff schedules, detailed explanations of international monetary transactions, a glossary of importing



terms, the latest customs regulations and procedures, plus those invaluable nuggets of wisdom that only come with firsthand experience.

A graduate of Harvard Law School, Stanley Gillmar has extensive experience in international trade and investment and is a senior partner in an international law firm in San Francisco. Mary Green is

RUNNING A ONE-PERSON BUSINESS

RUNNING A ONE-PERSON BUSINESS

by Whitmyer, Rasberry & Phillips

Good book on business. Good book. You get practical detailed advice on running a business. It's not quite like other business books. Sure, it talks about forms and regulations, but it also talks about people issues, staying sane, healthy and solvent. It's advice from one businessman to another. It's good. From the backcover:

"Times have changed and the one-person business, especially small businesses run from the home or the professional office, are a permanent part of our new economy. This book is a comprehensive approach to the needs of the one-person business. With interviews of the many successful entrepreneurs who have struck out on their own and stuck with it, Running a One-Person Business is full of the practical information needed by those currently in business for themselves or those who are planning to be."

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If you're considering starting a business or are running one now, there's something in this for you. I've been at it a while, and they taught me some valuable lessons. Consider it! 7 1/2 x 9 1/2 paperback 204 pages

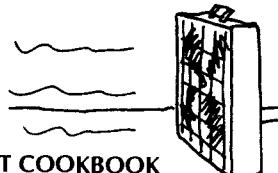
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that six-pack in the refrigerator. There's an exciting world out there that YOU can explore. YOU can come back through customs, and YOU can peddle enough goods to turn right around and go back for more! It's not just for someone else.

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THE "I LOVE TO FART" COOKBOOK



I LOVE TO FART COOKBOOK

by Travis W. Pacone

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While you're mixing up a batch of Swamp Gas Soup, you can read interesting background information and enjoy



the cartoons. But be careful! If you give this book to your wife and she uses it, you may end up sleeping alone in the garage!

Irreverent! Tasteless! Disgusting! In other words, a book you'll probably enjoy... or you know someone who will. Makes a ridiculous gift! Grab a copy or two! 7 1/2 x 5 1/2 paperback about 128 pages

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THE GREAT BOOK OF OPTICAL ILLUSIONS

by Gyles Brandreth

I've been told that reading this catalog too often will make you go

blind, perhaps even make hair grow on your tongue! If your eyesight hasn't given out entirely by now, then totally destroy it with these optical illusions.

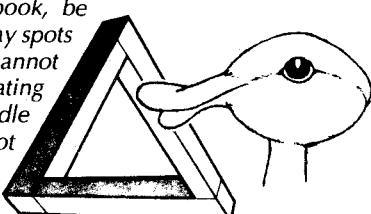
From the back cover: *"If you open this book, be prepared for moving specks before your eyes, gray spots that appear and disappear, solid objects that cannot exist, straight lines that wave and bend, gyrating circles, pulsating patterns, and mazes that muddle the mind! Do not believe anything you see. Do not attempt to read this book with a weak stomach. You have been warned..."*

If you regularly read this catalog, then you certainly don't have much taste in literature! If you're wondering if you can handle this great literary work, don't sweat it. It's written for kids. Chances are you can get through it (although my 8 year-old had to help me at times...)

Fun book. No useful value. Cheap. Interesting illusions. Old standards and new ones, too. 5 1/2 x 8 1/2 96 pages.

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Zap Your Eyes! Go Blind!



Are you going thru life in an hypnotic trance?

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HYPNOTISM & HYPNOTIC SUGGESTION
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PISSING IN THE SNOW AND OTHER OZARK FOLKTALES

by Vance Randolph

Randolph collected legends and tales of the Ozark people for over forty years, and had much of the material printed in five volumes by Columbia University Press in the mid-1950's. But no one had the guts to print the dirty stories in his collection. The original manuscript was deposited in the National Archives and at Indiana University about 1954. In 1976 the University of Illinois found the courage to put the collection in print.

If you're offended by this type of material, for God's sake DON'T order a copy. (And don't write to complain. Just keep your opinion to yourself on this one.) But if you like a little ribald humor once in a while, this is really funny in places, and quite interesting.

"One time there was two farmers that lived out on the road to Carico. They was always good friends, and Bill's oldest boy had been a-sparking one of Sam's daughters. Everything was going fine till the morning they met down by the creek, and Sam was..."

And on it goes. Each story is several paragraphs long, and most use words you won't find in family newspapers (but you WILL find in movie theaters). The introduction explained, *"The Ozark hillfolk seldom tell ribald stories in mixed company, as many city people do. They have their own ideas of propriety, and are often shocked by innocuous urban conversation. The old-timers feel that sexual and scatological topics have no place in casual talk between men and women... Most of the bawdy tales which I have collected were told by adult males when no womenfolk were about... Such stories are not aphrodisiac, or intended to incite antisocial sex activity. They merely evoke laughter."*

Crazy book! Dirty stories. Recommended to me by local bankers, lawyers and other professionals with a sense of humor. (If the rest of the community only knew! But maybe they already do....) When you get tired of machining metal, open a beer and have a laugh. Order a copy of this. 5 1/2 x 8 1/2 paperback 153 pages (no illustrations fortunately)

Cat. no. 6037

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HOW TO LOOK THINGS UP AND FIND THINGS OUT

HOW TO LOOK THINGS UP AND FIND THINGS OUT

by Bruce L. Felknor

From the back cover—

"There are thousands of reference books on the shelves of libraries and other research facilities today – all unique and all a little intimidating. How to Look Things Up and Find Things Out shows you how to navigate the convoluted and confusing world of encyclopedias, sports almanacs, how-to manuals, library card catalogs, specialized dictionaries, and even computer databases. Its clearly organized, entertainingly written chapters show you how to look up information about the arts, religion, education, industry, technology, recreation, and many other topics.

How to Look Things Up and Find Things Out is a must for anyone who does research for any reason. It is a map to the world of information that no one – student, teacher, writer, or businessman – should be without."

I shouldn't offer this. I don't like to give away my secrets. But the truth is the better you are at using books to investigate the world around you, the better it is for the both of us. And I'm embarrassed to admit that I've learned more than a few tricks from this book. Consider it. 6x9 paperback 290 pages \$9.95

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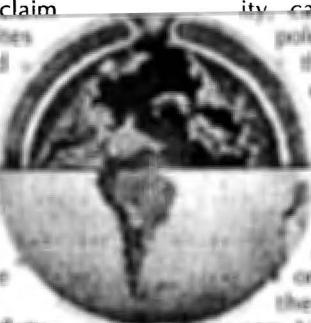
THE EARTH IS HOLLOW!

THE PHANTOM OF THE POLES

by William Reed

reprinted by Lindsay Publications

The earth is hollow! You get a reprint of an early, rare classic text on the theory that there are holes at the ends of the earth that lead into the interior where there are continents and civilizations that are yet to be discovered. In fact, some people claim that NASA satellites have photographed these holes but that the photos have been suppressed. In this book Reed set out to explain unexpected and unexplained phenomena seen at the poles.



Chapters include: working of the earth at the poles, length of polar nights, working of the compass, around the curve, mysteries of the polar regions, the water sky - what it is, the aurora, meteors or volcanic disturbances, finding of rock in and on ice, dust in the arctic, open water at the farthest point north and south, why it is warmer near

1906 Classic is Back!

the poles, driftwood - whence it came, have others that Esquimos inhabited the arctic regions?, what produces colored snow in the arctic, where and how are icebergs formed, the tidal wave, clouds and fogs, arctic and antarctic winds, the centre of gravity cannot reach the poles, and what is in the interior of the earth.

You'll find references to this rare 1906 classic mentioned in the few articles published on the hollow-earth theory in recent

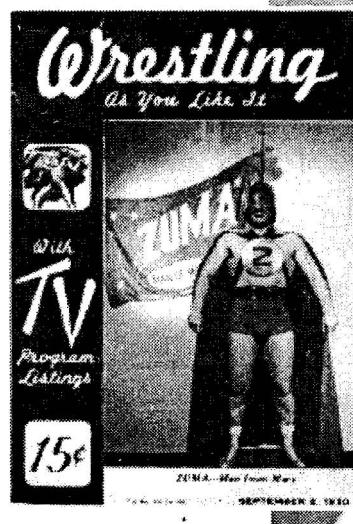
years. Now you can put a copy in your reference library at a fraction of the cost of an original assuming you can find one. Rare book. Unusual. An essential part of that realm of unusual scientific theories and/or myths that never seem to die. Worth having! Consider it. 4 1/2 x 7 paperback 280 pages \$11.95

THE ENCYCLOPEDIA OF BAD TASTE

by Jane & Michael Stern

I know for a fact YOU'LL enjoy this hilarious, well-illustrated book because you have proven beyond any reasonable doubt that YOU have no taste whatsoever. How do I know? You're reading this catalog....

You get an entertaining and amusing history and illustrations on every imaginable example of bad taste from accordion music to zoot suits. And if you think you're really a smooth dude, you had better think again. You ain't nothin' fella if you eat Twinkies and Spam, listen to Muzak, think Dolly Parton is a babe,



watch professional wrestling from your reclining chair, drive your van to visit a wax museum, collect sno-globes and Hummels, and enjoy heavy metal music.

SUCH BAD TASTE! Join us rednecks and enjoy life!

This is a great book. After all the authors put down (and rightly so) all the good things in life from Barbie dolls, beer and big breasts to Frederick's of Hollywood to Bob Guccione.

Get a copy. Get your feelings hurt. Or give a copy to someone who needs his feelings hurt. Join the rest of us low-class rednecks and enjoy life. (If I can sell enough of these encyclopedias, perhaps I can buy some fuzzy-dice for my rear view mirror and a video tape of Liberace!)

Fun book. Lot's of laughs. Valuable weapon for knocking snooty people down off their pedestals. Order a copy! 9x10 paperback 331 pages \$16.00

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MICROSCOPES!

THE MICROSCOPE AND HOW TO USE IT
by Dr Georg Stehli

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As we proceed, we learn step by step the techniques involved: use of chloroform, preparation of permanent slides, mounting in glycerine, preparing dye solutions, dissection, blood smearing. We learn how to detect fat, find Vitamin C in food substances, prepare a frog for examination, view and distinguish bacteria, use the oil-immersion objective, dye bacilli spores, do microphotography, cut sections with the microtome. Following Dr. Stehli's careful instructions, we have entered and gone well into the fascinating world of microscopy."

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On election day you'll be using Lindsay's patented voting machine. You won't have to remember if your favorite candidate's name is Moe, Curly, or Larry. All you have to do is look at the cute little faces on the voting machine levers and pull one.

The only problem is that election judges are betting that people will use the cute little faces as punching bags. Voter turnout will certainly be heavy. But damage to Lindsay's voting machine will be devastating. Can you imagine what the damage to the candidate's ego might be?



While you're taping your hands and getting your boxing gloves on in preparation for the magic day, use your tongue to "thumb" through this new catalog. Order your favorite books. It's a great way to pass the time waiting for the next election.

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